

- 16.—*A Revised List of the South African Reptiles and Batrachians, with Synoptic Tables, special reference to the specimens in the South African Museum, and Descriptions of New Species.*—By G. A. BOULENGER, F.R.S., V.P.Z.S.

PART I.—LACERTILIA AND RHIPTOGLOSSA.

LACERTILIA.

Synopsis of the Families represented in South Africa.

- I. Upper surface of head with scales or granular tubercles.
 - A. Tongue short, with villose papillæ.
 - No movable eyelids ; dentition pleurodont *Geckonidæ.*
 - Movable eyelids ; dentition acrodont *Agamidæ.*
 - B. Tongue long, smooth, deeply bifid, sheathed at the base. . . *Varanidæ.*
- II. Upper surface of head with large or symmetrical shields.
 - A. Tongue with villose papillæ ; femoral pores *Zonuridæ.*
 - B. Tongue with scale-like imbricate papillæ or oblique plicæ.
 - Body vermiform ; scales soft, squarish, not imbricate *Amphisbænidæ.*
 - No bony plates under the scales ; femoral pores usually present. . . *Lacertidæ.*
 - Bony plates under the scales ; a lateral fold ; femoral pores . . . *Gerrhosauridæ.*
 - Bony plates under the scales ; no lateral fold ; no femoral pores . . . *Scincidæ.*

FAMILY GECKONIDÆ.

Tongue short, with villose papillæ. Dentition pleurodont. Body covered with granules or soft scales ; no large shields on the head. No movable eyelids ; pupil usually vertical.

Twelve Genera represented in South Africa.

- I. Digits not dilated.
 - Digits short, cylindrical, covered with small spinose scales, clawless *Chondrodactylus.*
 - Digits with narrow transverse plates inferiorly and with a long claw, fingers subcylindrical, toes depressed, with a lateral fringe of long pointed scales *Ptenopus.*

Digits webbed almost to the tips, covered with small granules, with a faint, obtuse claw *Pelmatogecko*.

II. Digits more or less dilated, with enlarged scales or lamellæ inferiorly.

A. Digits with a strong claw.

1. Digits dilated at the apex, which is furnished inferiorly with two plates separated by a longitudinal groove.

Digits with only one pair of plates inferiorly, at the apex . . . *Phyllodactylus*.

Digits with one or two pairs of plates inferiorly, in addition to the apical pair *Edura*.

2. Digits cylindrical or compressed at the apex, the dilated part with paired lamellæ inferiorly.

Inner digit well developed; pupil vertical *Hemidactylus*.

Inner digit rudimental; pupil round *Lygodactylus*.

3. Digits entirely dilated, with a single series of lamellæ inferiorly; body covered with small imbricate scales *Homopholis*.

B. Digits clawless, or with a very indistinct claw

Digits strongly dilated, with transverse lamellæ inferiorly, with a minute claw fitting in a notch of the distal lamellæ . . . *Elasmodactylus*.

Digits more or less dilated, clawless, or with a very minute claw, the distal lamellæ undivided *Pachydactylus*.

Tips of fingers slightly dilated, of toes rather narrowed; no claws *Colopus*.

Digits very unequal, dilated at the apex only, clawless or with very minute claw; eyelid distinct all round the eye . . . *Rhoptropus*.

1. CHONDRODACTYLUS.

Peters, Mon. Berl. Ac., 1870, p. 110; Bouleng. Cat. Liz. i. p. 10.

1. *C. ANGULIFER*, Peters, *l.c.*, p. 111, pl. —, fig. 1; Bouleng., *l.c.*, p. 11.

Deserts of Cape Colony.

Little Namaqualand (M. Schlechter, Whitley, R. Moffat), Kenhardt (Schlechter), Touw's River (A. G. Atherstone), Beaufort West (W. F. Purcell).

C. weira, Bouleng. P.Z.S., 1887, p. 339, distinguished by larger ventral scales, is probably not specifically separable from *C. angulifer*.

2. PTENOPUS.

Gray, P.Z.S., 1865, p. 640; Bouleng. Cat. Liz. i. p. 15.

1. *P. GARRULUS*.

Stenodactylus garrulus, Smith, Ill., Rept., App. p. 6.

Ptenopus garrulus, Bouleng., *l.c.*, p. 15.

Deserts of Cape Colony ; German South-West Africa.

Little Namaqualand (Schlechter), Zwart Modder ; Kenhardt,
Cape Colony (Schlechter).

3. PELMATOGECKO.

Andersson, Jahrb. Nass. Ver. Wiesbaden, lxi., 1908, p. 299.

1. P. RANGEI, Anderss., *l.c.*, pl. iii. fig. 1.

Syndactylosaura schultzei, Werner, Jen. Denkschr. xvi., 1910,
p. 316, pl. vi. fig. 3.

German South-West Africa.

4. PHYLLODACTYLUS.

Gray, Spicil. Zool., 1830, p. 3 ; Bouleng. Cat. Liz. i. p. 76.

Three Species.

Back with large keeled tubercles separated from one another by granules *P. peringueyi*.

Back with uniform granules, which are smaller than those on the snout ; nostril separated from the first labial by a narrow shield.. *P. porphyreus*.

Back with uniform small flat scales, which are as large as the granules on the snout ; first labial bordering the nostril . . . *P. lineatus*.

1. P. PERINGUEYI, sp. n.

Little Namaqualand (L. Péringuey) ; Port Elizabeth (Moorhouse).

2. P. PORPHYREUS.

Gecko porphyreus, Daud. Hist. Rept. iv. p. 130.

Phyllodactylus porphyreus, Bouleng. Cat. Liz. i. p. 87.

Cape Colony and German South-West Africa.

Cape Peninsula (Purcell, C. A. Fairbridge) ; Cape Division (H. Glasson) ; Cape Town (Layard, T. D. Butler, J. H. Paynter) ; Cape Flats (R. Smith) ; Wynberg (W. L. Selater) ; Ceres (Purcell) ; Calvinia (C. L. Leipoldt) ; Sir Lowry's Pass, Caledon Division (Purcell) ; Clanwilliam (Leipoldt) ; Little Namaqualand (Péringuey).

3. P. LINEATUS.

Smith, Ill., Rept., App. p. 7 ; Bouleng., *l.c.*, p. 92.

Cape Colony.

Tulbagh (R. M. Lightfoot) ; Clanwilliam (Leipoldt) ; O'okiep,
Little Namaqualand (Schlechter) ; Bushmanland (Schlechter).

5. CEDURA.

Gray, Zool. Miscell., 1842, p. 52; Bouleng. Cat. Liz. i. p. 104.

Two Species.

Rostral bordering the nostril *C. africana*.
 Rostral separated from the nostril *C. nivaria*.

1. *C. AFRICANA*, Bouleng., Ann. & Mag. N.H. (6) ii., 1888, p. 137.
 German South-West Africa, Cape Colony, Natal, Transvaal.
 Cape Colony: Walfish Bay, *type* (P. Nightingale); Kentani,
 Transkei (Rev. Dr. Kolbe); Port St. Johns, (A. S. Weisecker).
 Natal: Durban (Col. J. H. Bowker).
2. *C. NIVARIA*, Bouleng., P.Z.S., 1894, pp. 605 and 726, pl. xlvii.
 fig. 1.
 Top of Drakensberg Range, North-West Natal; Albany Division
 of Cape Colony (French).

6. HEMIDACTYLUS.

Gray, Ann. Phil. (2) x., 1825, p. 199; Bouleng. Cat. Liz. i. p. 113.

This genus is represented in South Africa by a single species,
 widely distributed in Tropical Africa and America:—

1. *H. MABOUIA*, Mor. de Jonn. Bull. Soc. Philom., 1818, p. 138;
 Bouleng., *l.c.*, p. 122.
 Portuguese East Africa and Transvaal.
 Transvaal: Louw's Creek (L. Gough).

7. LYGODACTYLUS.

Gray, P.Z.S., 1864, p. 59; Bouleng. Cat. Liz. i. p. 158.

Two Species.

4 or 5 pairs of lamellæ under the median digits; mental (sym-
 physal) shield with two clefts converging forwards *L. capensis*
 3 pairs of lamellæ under the median digits; mental without clefts.. *L. ocellatus*.

1. *L. CAPENSIS*.
Hemidactylus capensis, Smith, Ill., Rept. pl. lxxv. fig. 3.
Lygodactylus capensis, Bouleng., *l.c.*, p. 160.
 Somaliland to Natal; Angola.
 Natal: Durban (Bowker).
 Transvaal: Barberton (Dr. P. Rendall).
 Southern Rhodesia: Salisbury (G. A. K. Marshall).
 Portuguese East Africa: Delagoa Bay (J. de Coster).

2. *L. OCELLATUS*, Roux, Zool. Jahrb., Syst., xxv., 1907, p. 406,
pl. xiv. figs. 1-3.
Transvaal (Pretoria District).

8. HOMOPHOLIS.

Bouleng. Cat. Liz. i. p. 191.

1. *H. WAHLBERGII*.

Gecko wahlbergii, Smith, Ill., Rept. pl. lxxv. fig. 1.

Homopholis wahlbergii, Bouleng., *l.c.*

Homopholis macrolepis, Bouleng. Ann. & Mag. N. H. (5) xvi.,
1885, p. 474.

Portuguese East Africa to Natal.

Portuguese East Africa: Delagoa Bay (De Coster), type of
H. macrolepis.

Transvaal: Barberton (Rendall, Kolbe).

Southern Rhodesia: Salisbury (R. H. Thomas).

9. ELASMODACTYLUS.

Bouleng. P.Z.S., 1894, p. 727.

1. *E. NAMAQUENSIS*, W. L. Slater, Ann. S. Afr. Mus. i., 1898,
p. 109, pl. v. fig. 2.
Little Namaqualand (W. C. Scully), *types*.

10. PACHYDACTYLUS.

Wiegmann. Herp. Mex. p. 19; Bouleng. Cat. Liz. i. p. 200.

Synopsis of the Species.

I. Dorsal scales intermixed with larger tubercles.

A. Dorsal tubercles smooth or keeled; ventral scales flat,
imbricate or subimbricate.

1. 8 to 12 lamellæ under the dilated part of the median
digits, the rest covered with small scales.

Dorsal tubercles strongly keeled *P. bibroni*.

Dorsal tubercles smooth or very feebly keeled *P. lævigatus*.

2. 7 to 9 lamellæ under the dilated part of the median
digits, which in their cylindrical part bear a series of
narrow lamellæ; dorsal tubercles strongly keeled

P. fasciatus.

3. 4 to 6 lamellæ under the dilated part of the median
digits.

a. First upper labial not touching the nostril.

Granules on hinder part of head intermixed with larger tuber-
cles; dorsal tubercles large, moderately or feebly keeled; body
spotted

P. capensis.

Granules on hinder part of head intermixed with larger tubercles; dorsal tubercles large, strongly keeled, often trihedral; body cross-barred. *P. formosus*.

No enlarged tubercles on hinder part of head; dorsal tubercles small, more or less strongly keeled *P. affinis*.

b. First upper labial entering the nostril; dorsal tubercles large, feebly keeled *P. weberi*.

B. Dorsal tubercles large, conical; ventral scales granular-conical; tail with whorls of spine-like tubercles *P. rugosus*.

C. Dorsal tubercles small, distinguished from the granules only by their larger size, sometimes conical *P. maculatus*.

II. Dorsal scales equal.

A. Head very convex; rostral widely separated from nostril.

4 or 5 transverse lamellæ under the median digits; rostral shield not or but slightly broader than deep; dorsal scales convex, not much smaller than ventrals *P. ocellatus*.

5 or 6 lamellæ under the median digits; rostral shield much broader than deep *P. amœnus*.

3 or 4 transverse lamellæ under the median digits; rostral shield much broader than deep; dorsal scales convex, not smaller than ventrals *P. muriquensis*.

4 transverse lamellæ under the median digits; rostral shield much broader than deep; dorsal scales flat, much smaller than ventrals *P. punctatus*.

B. Head more or less strongly depressed; 5 or 6 transverse lamellæ under the median digits.

Rostral nearly twice as broad as deep, entering the nostril; snout a little longer than the orbit *P. purcelli*.

Rostral but little broader than deep; snout much longer than the orbit *P. serrul*.

1. P. BIBRONI.

Tarentola bibronii, Smith, Ill., Rept. pl. i. fig. 1.

Pachydactylus bibronii, Bouleng. Cat. Liz. i. p. 201.

South Africa, northwards to Benguela and Mozambique.

Cape Colony; Little Namaqualand (Moffat, W. C. Scully, W. H. Turle, Schlechter, Krapohl); O'okiep, Little Namaqualand (G. Worden); Garies, Little Namaqualand (Dr. R. Broom); Cape Flats (R. Smith); Matjesfontein, Worcester (Dr. W. P. van de Merwe, Lightfoot); Burghersdorp (Dr. D. R. Kannemeyer); Clanwilliam (Schlechter); Calvinia (Schlechter); Hanover (C. S. Cronwright-Schreiner); Graaff-Reinet (Paynter); Montague (Purcell); Caledon (Purcell); Swellendam (Purcell); Bredasdorp (Fry); Bechuanaland (S. Blackbeard).

2. P. LÆVIGATUS, J. G. Fischer, Jahrb. Hamb. Wiss. Anst. v., 1888, p. 15, pl. ii. fig. 3.

German South-West Africa; Little Namaqualand.

Little Namaqualand (Schlechter).

3. *P. FASCIATUS*, Bouleng. Ann. & Mag. N. H. (6) ii., 1888, p. 138.
Namaqualand and Natal.
Namaqualand (Péringuey), *type*; Natal (Sanderson).
4. *P. CAPENSIS*.
Tarentola capensis, Smith, Ill., Rept. pl. ii. fig. 2.
Pachydactylus capensis, Bouleng. Cat. Liz. i. p. 202.
Cape Colony, Orange River Colony, Natal, Transvaal, Bechuanaland, Southern Rhodesia, Portuguese East Africa.
Cape Colony: Little Namaqualand; Beaufort West (Jackson); Burghersdorp (Kannemeyer); Hanover (Shortridge, Cronwright-Schreiner); Modder River (Butler); Clanwilliam (Lightfoot); Matjesfontein, Worcester Division (Purcell); Port Elizabeth (Moorhouse).
Orange River Colony: Kroonstad (Watermeyer); Smithfield (Kannemeyer).
Transvaal: Johannesburg (Ross); Irene (Taylor); Pietersburg (Daneel); Middelburg (Dr. C. S. Piers); Modderfontein (A. Haagner); Barberton (Rendall).
Bechuanaland: Kuruman (C. G. Alston).
Southern Rhodesia: Bulawayo (R. Pillans).
Portuguese East Africa: Delagoa Bay (De Coster).
5. *P. FORMOSUS*, Smith, Ill., Rept., App. p. 4; Bouleng. Cat. Liz. i. p. 203, pl. xvi. fig. 2.
P. obscurus, Thomassinot, Bull. Soc. Philom. (8) i., 1889, p. 22 (type examined).
I now regard *P. mentomarginatus*, Smith, *op. cit.* p. 5, as the young of *P. formosus*.
Cape Colony, Bechuanaland, Transvaal.
Cape Colony, Little Namaqualand (Scully); Concordia, Little Namaqualand (Krapohl); Ceres (Lightfoot); Clanwilliam (Lightfoot); Calvinia (Leipoldt); Port Elizabeth (M. Weale).
6. *P. AFFINIS*, Bouleng. Ann. & Mag. N. H. (6) xvii., 1896, p. 21.
Transvaal; Rhodesia.
Southern Rhodesia (Pillans).
7. *P. WEBERI*, Roux, Zool. Jahrb., Syst., xxv., 1907, p. 408, pl. xiv. figs. 4 and 5.
Little Namaqualand.

8. *P. RUGOSUS*, Smith, Ill., Rept. pl. lxxv. fig. 2; Bouleng. Cat. Liz. i. p. 204.
 Bechuanaland, Little Namaqualand.
 Little Namaqualand (Schlechter).
9. *P. MACULATUS*, Smith, Ill., Rept., App. p. 4; Bouleng. Cat. Liz. i. p. 206, pl. xvi. fig. 4.
 Cape Colony, Natal, Transvaal, Southern Rhodesia.
 Cape Colony: Cape Peninsula (French); Little Namaqualand (Moffat); Beaufort West (Purcell); Worcester (Purcell); Robertson (Purcell); Graaff-Reinet (Paynter); Port Elizabeth (Drege, Moorhouse); King William's Town (Purcell); Hanover (Schreiner); Kentani, Transkei (Kolbe); Albany Division (French).
 Southern Rhodesia: Bulawayo (Pillans).
10. *P. OCELLATUS*.
Gecko ocellatus, Cuv. R. A. ii. p. 46.
Pachydactylus ocellatus, Bouleng. Cat. Liz. i. p. 205.
 Cape Colony, Natal, Transvaal, Angola.
 Cape Colony: Cape Town (Purcell); Robben Island (Purcell, Oakley); Tulbage (Purcell); Cape Division (Turle); Beaufort West (Purcell); Calvinia (Schlechter, Leipoldt); Worcester Division (Purcell, Lightfoot); Mossel Bay (Drege); Worcester (Leipoldt); Bredasdorp (Fry); Caledon (Purcell); Swellendam (Purcell); Robertson (Purcell); Prince Albert (Purcell); Steynsburg (Ponder).
11. *P. AMOENUS*, Werner, Jen. Denkschr. xvi., 1910, p. 314, fig.
 Little Namaqualand.
12. *P. MARIQUENSIS*, Smith, Ill., Rept., App. p. 3; Bouleng. Cat. Liz. i. p. 207, pl. xvi. fig. 6.
 Cape Colony, Bechuanaland, Orange River Colony.
 Cape Colony: Little Namaqualand (Whiley); Clanwilliam (Schlechter); Springbokfontein (Schlechter); Worcester (Meiring); Hanover (Schreiner); Graaff-Reinet (Paynter); Worcester Division (Purcell); Malmesbury (Péringuey); Kenhardt (Schlechter); Albany Division (French).
 Orange River Colony: Smithfield (Kannemeyer).
13. *P. PUNCTATUS*, Peters, Mon. Berl. Ac., 1854, p. 615; Bouleng. Cat. Liz. i. p. 206.
 Mozambique, Rhodesia, Bechuanaland.

Southern Rhodesia : Matoppos (Pillans).

Bechuanaland : Serowe (Blackbeard).

14. P. PURCELLI, sp. n.

Cape Colony.

Touw's River (Purcell) ; Little Namaqualand (Schlechter).

15. P. SERVAL, Werner, Jen. Denkschr. xvi., 1910, p. 313, fig.

Great Namaqualand.

11. COLOPUS.

Peters, Mon. Berl. Ac., 1869, p. 57 ; Bouleng. Cat. Liz. i. p. 208.

1. C. WAHLBERGII, Peters, *l.c.* ; Bouleng., *l.c.*

Damaraland.

12. RHOPTROPUS.

Peters, Mon. Berl. Ac., 1869, p. 58 ; Bouleng. Cat. Liz. i. p. 217.

Two Species.

Nostril in the centre of a swelling between three nasals ; inner toe

well developed, third extending much beyond fourth *R. afer.*

Nostril between the rostral and two nasals ; inner toe rudimentary,

fourth extending beyond third *R. ocellatus.*

1. R. AFER, Peters, *l.c.*, fig. 2 ; Bouleng., *l.c.*

Dactylchilikion braconnieri, Thominox, Bull. Soc. Philom. (7) ii.,
1878, p. 254.

Damaraland, Bechuanaland, Angola.

Damaraland : Walfish Bay (Nightingale).

2. R. OCELLATUS, Bouleng. Ann. & Mag. N. H. (5) xvi., 1885,
p. 475.

Cape Colony.

Cape Town (Layard).

FAMILY AGAMIDÆ.

Tongue short, with villose papillæ. Dentition acrodont. Body covered with scales or tubercles, without dermal ossifications ; no large shields on the head. Movable eyelids ; pupil round.

The Agamids of South Africa belong to a single genus.

1. AGAMA.

Daudin, Hist. Rept. iii. p. 333; Bouleng. Cat. Liz. i. p. 335.

Synopsis of the South African Species.

I. Occipital scale (bearing the "pineal eye") more or less enlarged.

- A. Fifth toe not extending as far as first; hind limb not reaching the ear; back with small scales intermixed with enlarged spinose ones.

Ear-opening smaller, or at any rate not larger, than eye-opening; third toe longer than fourth; ventral scales more or less strongly keeled, ending in a spine

A. hispida.

Ear-opening smaller, or at any rate not larger, than eye-opening; third and fourth toes equal, or fourth the longer; ventral scales smooth or feebly keeled.

A. brachyura.

Ear-opening larger than eye-opening; third toe longer than fourth; ventral scales smooth or feebly keeled

A. distanti.

- B. Fifth toe extending as far as first, or farther; ear-opening larger than eye-opening.

1. Scaling of back heterogeneous, with enlarged more or less spinose scales; a low crest or serrated line along the middle of the back

A. aculeata.

2. Scales on back equal or intermixed with more or less enlarged ones; a nuchal but no dorsal serration or crest.

The smallest dorsal scales not larger than the ventrals, the scaling homogeneous or heterogeneous

A. atra.

Dorsal scales equal in size, much larger than the ventrals

A. planiceps.

3. Scales on back equal; a more or less distinct denticulation or crest along the middle of the back.

Dorsal scales much larger than ventrals; latter keeled

A. mossambica.

Dorsal scales (except on vertebral region) scarcely larger than ventrals; latter smooth

A. kirkii.

II. Occipital scale not enlarged; scales on back unequal, irregular; scales on tail forming more or less distinct rings, and a double series on the median dorsal line

A. atricollis.

1. AGAMA HISPIDA.

Lacerta hispida, Linn. Mus. Ad. Fred. p. 44.

Agama hispida, Bouleng. Cat. Liz. i. p. 349.

Cape Colony, Natal, Orange River Colony.

Cape Colony: Cape Division (Oakley, de Souza); Worcester (Lycett); Knysna (Maritz); Little Namaqualand (Lightfoot, Broom).

Natal: Durban (Bowker).

Orange River Colony: Kroonstad (Watermeyer).

2. AGAMA BRACHYURA, Bouleng., *t.c.*, p. 350, pl. xxviii. fig. 1.

Cape Colony.

- Little Namaqualand (Péringuey, Broom, Schlechter, Lightfoot); Beaufort West (Jackson); Calvinia (Leipoldt); Matjesfontein (Purcell); O'okiep (Scully); Worcester (Lycett).
3. AGAMA DISTANTI, Bouleng. Ann. & Mag. N. H. (7) ix., 1902, p. 339.
Northern parts of Cape Colony, Orange River Colony, Transvaal, Southern Rhodesia, Portuguese East Africa.
Cape Colony: Little Namaqualand (Péringuey); Kowie (French); Burghersdorp (Kannemeyer).
Orange River Colony: Smithfield (Kannemeyer); Kroonstad (Watermeyer); Vredeford Road (Barrett-Hamilton).
Transvaal: Krugersdorp (Watson); Barberton (Rendall); Johannesburg (Purcell).
Portuguese East Africa: Delagoa Bay (De Coster).
Rhodesia: Mashonaland (ff. Darling).
4. AGAMA ACULEATA, Merrem, Tent. Syst. Amph. p. 53; Bouleng. Cat. Liz. i. p. 351.
Agama armata, Peters, Mon. Berl. Ac., 1854, p. 618; Bouleng., t.c., p. 352.
Agama pulchella, Bocage, Jorn. Sc. Lisb. (2) iv., 1896, p. 116.
Northern parts of Cape Colony, Orange River Colony, and Natal, to Angola and the Zambesi.
Cape Colony: Little Namaqualand (Péringuey); Kuruman (Moffat); De Aar (Local School); Kowie (French); Touw's River (Paynter); Burghersdorp (Kannemeyer).
Natal: Durban (Bowker).
Orange River Colony: Kroonstad (Watermeyer).
Transvaal: Waterberg (Purcell).
Rhodesia: Southern Rhodesia (Pillans); Bulawayo (Kolbe); Salisbury (Marshall, Thomas); North-West Rhodesia, Livingstone (Sykes).
German South-West Africa: Damaraland (R. Marloth).
5. AGAMA ATRA, Daud. Hist. Rept. iii. p. 349; Bouleng. Cat. Liz. i. p. 352.
A. micropholis, Matschie, Zool. Jahrb., Syst. v., 1890, p. 607.
A. microterolepis, Bouleng. Ann. & Mag. N. H. (6) xvii., 1896, p. 22.
A. holubi, Bocage, J. Sc. Lisb. (2) iv., 1896, p. 115.
Cape Colony, Orange River Colony, Natal, Transvaal, Rhodesia, Portuguese East Africa.

Cape Colony: Cape Division (Adcock); Worcester Division (Purcell); Hanover (Schreiner); Prince Albert (Purcell); Matjesfontein, Worcester Division (Lefèvre); O'okiep (Péringuey); Stellenbosch (Purcell); Caledon (Purcell); Dassen Island (Lightfoot); Calvinia (Leipoldt); East London (Wood); Bredasdorp (Fry); Touw's River, Worcester Division (Paynter); Port Elizabeth (Moorhouse); Kowie (French); Burghersdorp (Kannemeyer); Little Namaqualand (Schlechter, Turle).

Orange River Colony: Smithfield (Kannemeyer).

Transvaal: Lydenburg (Kilgour); Modderfontein (Haagner); Krugersdorp (Watson).

6. *AGAMA PLANICEPS*, Peters, Mon. Berl. Ac., 1862, p. 15; Bouleng. Cat. Liz. i. p. 358.

German South-West Africa, Angola, Congo.

German South-West Africa: Damaraland (Marloth).

7. *AGAMA MOSSAMBICA*, Peters, Mon. Berl. Ac., 1854, p. 618; Bouleng., *t.c.*, p. 353.

Portuguese East Africa, Northern Rhodesia, British Central Africa.

8. *AGAMA KIRKII*, Bouleng., *t.c.*, p. 354, pl. xxviii. fig. 2.

Southern Rhodesia, Portuguese East Africa, British Central Africa.

Southern Rhodesia: Importuni (R. Pillans).

9. *AGAMA ATRICOLLIS*, Smith, Ill., Rept., App. p. 14; Bouleng., *t.c.*, p. 358.

Northern and Eastern parts of Cape Colony, Natal, Zululand, Transvaal, Rhodesia, Portuguese East Africa, German South-West Africa, Angola.

Cape Colony: Little Namaqualand (Péringuey).

Natal: Durban (Bowker, Butler).

Transvaal: Barberton (Rendall).

Portuguese East Africa: Delagoa Bay (De Coster).

Southern Rhodesia: Mazoe (ff. Darling).

FAMILY ZONURIDÆ.

Tongue short, with villose papillæ. Dentition pleurodont. Head covered with bony plates and symmetrical shields. Movable eyelids. Femoral pores present.

Four Genera.

- I. Limbs well developed.
 - A. Back with bony plates underlying the horny scales, which are large *Zonurus*.
 - B. Back without bony plates, dorsal scales small.
 - Dorsal lepidosis heterogeneous *Pseudocordylus*.
 - Dorsal lepidosis uniformly granular *Platysaurus*.
- II. Limbs rudimentary; body serpentiform, covered with whorls of lanceolate, keeled scales *Chamaesaura*.

1. ZONURUS.

Merrem, Tent. Syst. Amph. p. 57; Bouleng. Cat. Liz. ii. p. 252.

Synopsis of the South African Species.

- I. Frontonasal in contact with the rostral, separating the nasals.
 - A transverse series of 4 large occipital spines; 23 to 25 transverse rows of scales from occiput to base of tail *Z. giganteus*.
 - A transverse series of 6 small occipital spines; 40 transverse rows of scales from occiput to base of tail *Z. warreni*.
- II. Frontonasal separated from the rostral by the nasals or the supranasals.
 - A. No supranasal, nostril in a large nasal, or between a large nasal and a small postnasal; lower eyelid entirely scaly.
 - 1. Flanks with large scales similar to or a little smaller than the dorsals.
 - a. Ventral scales smooth; frontonasal present.
 - α. Less than 20 rows of scales from occiput to base of tail.

Nasal strongly swollen, hemispherical, pierced in the centre . . . *Z. cataphractus*.

Nasal not swollen *Z. macropholis*.

β. More than 20 rows of scales from occiput to base of tail.

Lateral scales as large as dorsals *Z. cordylus*.

Lateral scales smaller than dorsals *Z. jonesii*.

b. Ventral scales keeled; frontonasal absent . . . *Z. tropidogaster*

2. Flanks covered with granular scales; only 8 longitudinal rows of ventral scales *Z. capeusis*.

B. A supranasal shield, distinct from the very small nasal; lower eyelid with a more or less transparent disk in the middle; more than 30 rows of scales from occiput to base of tail.

Anterior gular scales flat, moderate *Z. polyzonus*.

Anterior gular scales almost granular *Z. pustulatus*.

1. ZONURUS GIGANTEUS, Smith, Ill., Rept. pls. xxv. and xxxvi.; Bouleng., t.c., p. 253.

Cape Colony, Orange River Colony, Transvaal.

Cape Colony: Colesberg (Ortlepp).

- Orange River Colony : Kroonstad (Sir Jas. Sivewright); Hoopstad (J. Watery).
2. *ZONURUS WARRENI*, Bouleng. Ann. Natal Mus. i., 1908, p. 231, pl. xxxv.
Zululand.
3. *ZONURUS CATAPHRACTUS*.
Cordylus cataphractus, Boie, N. Acta Ac. Leop.-Carol. xiv., 1828, p. 140.
Zonurus cataphractus, Bouleng. Cat. Liz. ii. p. 255.
Western parts of Cape Colony.
Cape Colony: Little Namaqualand (Schlechter, Hoffman); Matjesfontein, Worcester Division (Lefèvre); Clanwilliam Division (Leipoldt).
4. *ZONURUS MACROPHOLIS*, sp. n.
Little Namaqualand.
5. *ZONURUS CORDYLUS*.
Lacerta cordylus, Linn. S. N. i. p. 361.
Zonurus cordylus, Bouleng. Cat. Liz. ii. p. 256.
Zonurus vittifer, Reichen. Zool. Anz., 1887, p. 372.
Whole of South Africa.
Cape Colony: Cape Town (Selater); Wynberg (Kleinschmidt); Robben Island (Purcell); Knysna (Moritz); George (Wilman); Albany Division (French); Stellenbosch (Purcell, Hutchinson); Tsomo, Transkei (Watermeyer); Middelburg (Piers); Bedford (Stephenson); Zuurberg, Alexandra Division (Drege); East London (Wood); Mount Ayliff (Weisbecker); Port Elizabeth (Moorhouse).
Natal: Umvoti (Fry).
Transvaal: Krugersdorp (Watson); Johannesburg (Cregoe).
German South-West Africa: Walfish Bay (Nightingale).
6. *ZONURUS JONESII*, Bouleng. Ann. & Mag. N. H. (6) vii., 1891, p. 417.
Transvaal, Southern Rhodesia, Bechuanaland.
Southern Rhodesia: Bulawayo (Kolbe); Matopopo Hill (Pillans); Bechuanaland: Palapye (Blackbeard).
7. *ZONURUS TROPIDOGASTER*, sp. n.
Transvaal.

8. ZONURUS CAPENSIS.

Cordylus capensis, Smith, Mag. N. H. (2) ii. 1838, p. 32.

Zonurus capensis, Bouleng. Cat. Liz. ii. p. 258.

Cape.

9. ZONURUS POLYZONUS.

Cordylus polyzonus, Smith, Mag. N. H. (2) ii. 1838, p. 34.

Zonurus polyzonus, Bouleng. Cat. Liz. ii. p. 257.

Cape Colony, Natal, Orange River Colony, German South-West Africa.

Cape Colony: Cape Town (French); Clanwilliam (Schlater, Slabber, Leipoldt); Burghersdorp (Kannemeyer); Knysna (De Souza); Middelburg (Piers); Calvinia (Leipoldt); Bredasdorp (Fry); Hanover (Schreiner); Houtjes Bay, Malmesbury Division (Wilson); Matjesfontein (Cowper); Little Namaqualand (Péringuey, Scully, Schlechter).

Natal: Natal (?).

Orange River Colony: Smithfield (Kannemeyer).

German South-West Africa: Prince of Wales Bay (Marloth).

10. ZONURUS PUSTULATUS, Peters, Mon. Berl. Ac., 1862, p. 19.

German South-West Africa.

2. PSEUDOCORDYLUS.

Smith, Mag. N. H. (2) ii., 1838, p. 32; Bouleng. Cat. Liz. ii. p. 259.

1. PSEUDOCORDYLUS MICROLEPIDOTUS.

Cordylus microlepidotus, Cuv. R. A. 2nd ed. ii. p. 33.

Pseudocordylus microlepidotus, Bouleng. t.c.

Cape Colony, Natal.

Cape Colony: Cape Town (Smith); Basutoland, Morija (Dyke).

Natal: Umvoti (Fry).

3. PLATYSAURUS.

Smith, Ill., Rept.; Bouleng. Cat. Liz. ii. p. 261.

1. PLATYSAURUS CAPENSIS, Smith, l.c., pl. xl.; Bouleng., l.c.

Platysaurus guttatus, Smith, l.c., App. p. 8; Bouleng., t.c., p. 262, pl. xiv. fig. 1.

Cape Colony, Transvaal, Zululand, Southern Rhodesia.

Cape Colony: Victoria West (Lightfoot).

Transvaal: Pietersburg (Daneel).

Southern Rhodesia: Importuni District (Pillans); Salisbury (G. A. K. Marshall, Thomas).

4. CHAMÆSAURA.

Schneid. Hist. Amph. p. 204; Bouleng. Cat. Liz. ii. p. 263.

Three Species in South Africa.

Both pairs of limbs present, pentadactyle; 28 scales round the body *C. ænea*.
 Both pairs of limbs present, with one or two claws; 24 or 26 scales
 round the body.. .. *C. anguina*.
 Fore limbs absent; 22 scales round the body *C. macrolepis*.

1. CHAMÆSAURA ÆNEA.

Cricochalus ænea, Fitzing. Syst. Rept. p. 21.

Chamæsaure ænea, Bouleng., *t.c.*, p. 263.

Eastern parts of Cape Colony, Natal, Transvaal.

Transvaal: Modderfontein (Haagner).

2. CHAMÆSAURA ANGUINA.

Lacerta anguina, Linn. S.N. i. p. 371.

Chamæsaure anguina, Bouleng., *t.c.*, p. 264.

Chamæsaure didactyla, Bouleng. P.Z.S. 1890, p. 82, pl. xi. fig. 1.

Cape Colony, Natal.

Cape Colony: Cape Town (Jeffreys); Port Elizabeth (Drege);

Caledon Division (Lightfoot, Burges); Worcester (Hugo); Kei

Road (Schreiner); Kentani (Pegler); East Pondoland (Rogers);

Little Namaqualand (Hahn).

Natal: Durban (Bowker, Sanderson).

3. CHAMÆSAURA MACROLEPIS.

Mancus macrolepis, Cope, Proc. Ac. Philad., 1862, p. 339.

Chamæsaure macrolepis, Bouleng. Cat. Liz. ii. p. 264.

Natal, Zululand.

Natal: Durban (Bowker).

FAMILY VARANIDÆ.

Tongue very long and slender, bifid, retractile into a sheath at the base. Dentition pleurodont; teeth large. Head and body covered with small scales. Movable eyelids. No femoral pores.

A single genus:—

1. VARANUS.

Merrem, Tent. Syst. Amph. p. 58; Bouleng. Cat. Liz. ii. p. 304.

Two Species in South Africa.

Nostril an oblique slit; toes short *V. albigularis*.
 Nostril round; toes longer *V. niloticus*.

1. *VARANUS ALBIGULARIS*.

Tupinambis albigularis, Daud. Hist. Rept. iii. p. 72.

Varanus albigularis, Bouleng., t.c., p. 307.

Interior of Cape Colony, Natal, Zululand, Transvaal, Rhodesia, Portuguese East Africa, German South-West Africa, Angola, British Central Africa.

Cape Colony: Fraserburg Road (Sachs); Graaff-Reinet (A. Eckley); Beaufort West; Little Namaqualand (Péringuey) Tsomo (Watermeyer).

Orange River Colony: Smithfield (Kannemeyer).

Transvaal: Barberton (Rendall).

Southern Rhodesia: Salisbury (ff. Darling, H. M. Oakley).

Portuguese East Africa: Pungwe River (T. D. Butler).

2. *VARANUS NILOTICUS*.

Lacerta nilotica, Linn. S.N. i. p. 369.

Varanus niloticus, Bouleng., t.c., p. 317.

From Egypt, through the whole of Tropical Africa, to Cape Colony and Natal.

Cape Colony: Griqualand West (Murison); Orange River; Quora River; Transkei (Oakley); Uitenhage (Drege); Bedford (Stephenson); Hanover (Schreiner).

FAMILY *AMPHISBÆNIDÆ*.

Tongue moderately long, covered with imbricate scale-like papillæ, ending in two long, narrow, smooth points. Teeth large and few. Body vermiform; skin divided into soft squarish segments forming regular annuli. Eyes concealed under the skin.

Three Genera in South Africa.

Segments of the pectoral region not differentiated; eye under an ocular shield; præanal pores *Amphisbæna*.

Segments of the pectoral region not differentiated; no ocular shield, the eye under the posterior part of a large shield in which the nostril is pierced; no præanal pores *Chirindia*.

Segments of the pectoral region enlarged, forming shields; head depressed, with projecting sharp-edged snout; nostril in a small nasal on the lower surface of the snout *Monopeltis*.

1. *AMPHISBÆNA*.

Linn. S.N. i. p. 392; Bouleng. Cat. Liz. ii. p. 435.

Two Species in South Africa.

One pair of præfrontal shields between the nasals and the frontals *A. violacea*.

Two pairs of præfrontals in a transverse line between the nasals and the frontals *A. quadrijrons*.

1. AMPHISBÆNA VIOLACEA, Peters, Mon. Berl. Ac., 1854, p. 620 ;
Bouleng., *t.c.*, p. 446.
Amphisbæna capensis, Thominot, Bull. Soc. Philom. (7) xi. 1887,
p. 188.
Zululand, Portuguese East Africa, Bechuanaland.
2. AMPHISBÆNA QUADRIFRONS, Peters, Mon. Berl. Ac., 1862, p. 26 ;
Bouleng., *t.c.*, p. 447.
German South-West Africa, Rhodesia.
North-West Rhodesia : Sesheke, Barotseland (Jalla).

2. CHIRINDIA.

Bouleng. Ann. & Mag. N. H. (7) xx., 1907, p. 48.

1. CHIRINDIA SWYNNERTONI, Bouleng., *l.c.*, fig.
Southern Rhodesia : Chirinda Forest, Mashonaland.

3. MONOPELTIS.

Smith, Ill., Rept. ; Bouleng. Cat. Iiz. ii. p. 453.

Six Species in South Africa.

- I. A single large shield on the head.
 - A. Tail rounded at the end ; rostral shield tetragonal,
separating the nasals.
3 pairs of large pectoral plates ; 40 to 50 segments round the
body *M. capensis*.
2 pairs of large pectoral plates ; 34 segments round the body.. *M. decosteri*.
B. Tail truncate at the end ; nasals in contact above the
rostral ; 3 pairs of large pectoral plates ; 28 to 32 seg-
ments round the body.
- Snout (seen from above or below) very pointed *M. granti*.
Snout rounded *M. colobura*.
- II. Two large shields on the head, completely or incompletely
divided by a transverse suture ; tail rounded at the end ;
rostral hexagonal, much wider at the base than above,
separating the nasals.
3 pairs of large pectoral plates *M. leonhardi*.
2 pairs of large pectoral plates *M. quadriscutata*.
1. MONOPELTIS CAPENSIS, Smith, *l.c.*, pl. lxvii. ; Bouleng., *t.c.*, p. 455.
Northern parts of Cape Colony, German South-West Africa,
Angola.
Cape Colony : Little Namaqualand (Kisch).
2. MONOPELTIS DECOSTERI, sp. n.
Delagoa Bay (De Coster).

3. *MONOPELTIS GRANTI*, Bouleng. P.Z.S., 1907, p. 485, fig.
Portuguese East Africa.
4. *MONOPELTIS COLOBURA*, sp. n.
North-West Rhodesia.
Sesheke, Barotseland (Jalla).
5. *MONOPELTIS LEONHARDI*, Werner, Jen. Zeitschr. xvi., 1910,
p. 328, pl. vi. fig. 2.
German South-West Africa: Little Namaqualand, Bechuanaland.
Little Namaqualand (Kisch).
Bechuanaland: Palapye (Fry).
6. *MONOPELTIS QUADRISCUTATA*, Werner, *l.c.*
German South-West Africa.

FAMILY LACERTIDÆ.

Tongue moderately long, with scale-like papillæ or oblique plicæ.
Dentition pleurodont. Upper surface of head with large symmetrical
shields. Belly with transverse series of large shields differing from
the scales on the back. Femoral pores usually present.

Six Genera in South Africa.

- I. Digits smooth or indistinctly keeled inferiorly, not serrated
laterally.
Collar well marked; dorsal scales small *Nucas.*
Collar absent; dorsal scales large, imbricate, strongly keeled . . . *Tropidosaura.*
- II. Digits keeled inferiorly, not serrated laterally.
Collar absent; dorsal scales large, imbricate, strongly keeled;
upper head-shields rugose *Ichnotropis.*
Collar well marked; dorsal scales small; digits not serrated
laterally; subocular bordering the lip *Eremias.*
- III. Digits serrated laterally; dorsal scales small; subocular not
bordering the lip.
Collar well marked; femoral pores present *Scaptira.*
Collar absent; no femoral pores *Aporosaura.*

1. NUCRAS.

Gray, Ann. N. H. i., 1838, p. 280; Bouleng. Cat. Liz. iii. p. 52.

Two Species.

- Lower surface of fore-arm with enlarged shields; a series of scales
(sometimes reduced to two) between the supraocular and supra-
ciliary shields; foot at least as long as head (to ear-opening) . . . *N. tessellata.*
Lower surface of fore-arm without or with very slightly enlarged
shields; usually no scales between the supraocular and supra-
ciliary shields; foot shorter than head *N. delalandii.*

1. NUCRAS TESSELLATA.

Lacerta tessellata, Smith, Mag. N. H. (2) ii., 1838, p. 92.

Nucras tessellata, Bouleng., *t.c.*, p. 52.

May be divided into a number of well-defined varieties.

A. Foot considerably longer than the length of the head measured to the posterior border of the ear.

Neck and anterior part of back black, with 3 or 4 white lines above and white vertical bars on the sides; posterior part of body pale buff, with or without black spots. 39-47 scales across the

body *Forma typica*.

Cape Colony.

Cape Colony: Little Namaqualand (Péringuey, Scully, Schlechter); Clanwilliam (Leipoldt); Calvinia (Leipoldt); Robertson (Melle); Worcester (Paynter).

Pale reddish brown above and on the sides; two white, black-edged streaks on the neck; 45-47 scales *Var. elegans*, Smith.

Little Namaqualand.

Neck black with 6 white lines above and white bars on the sides; back pale buff behind, with black vermiculations or lineolations; a white, black-edged dorso-lateral line; sides black, spotted with white; 46-56 scales *Var. livida*, Smith.

North-Western parts of Cape Colony.

Little Namaqualand (Scully).

Eight white lines on the back and sides, separated by black streaks, sometimes a ninth on the neck; the series originating just above the ear sometimes broken up into spots; 45-50 scales *Var. tenuolata*, Smith.

Cape Colony, Natal, Mossamedes.

Cape Colony: Little Namaqualand (Péringuey).

Natal: Pine Town (Bowker).

B. Foot not or but slightly longer than the head.

Sides of neck and body black with round white spots and back brown with three light, black-edged longitudinal lines, or brown or blackish above and on the sides with 7 white lines, the outer of which may be broken up into spots; 46-60 scales. *Var. holubi*, Sldr.

North and east parts of Cape Colony, Orange River Colony, Transvaal, Rhodesia.

Cape Colony: Burghersdorp (Kannemeyer); Little Namaqualand (Péringuey)

Orange River Colony : Smithfield (Kannemeyer).

Transvaal : Barberton (Rendall).

Southern Rhodesia : Bulawayo (Kolbe).

Sides of neck with black and white bars or with vertically elongate black and white ocellar spots ; usually two or three light lines along the back and ocellar spots on the sides ; 44-58 scales Var. *ornata*, Gray.

Transvaal, Rhodesia, Zululand, Portuguese East Africa.

Sides of neck with black and white bars ; back and sides with black and white ocelli much as in *N. delalandii* ; a light vertebral streak sometimes present ; 40-48 scales . . Var. *n. ocellata*, Blgr.

Transvaal.

Loc. (?) No history.

2. NUCRAS DELALANDII.

Lacerta lalandii, M.-Edw. Ann. Sc. Nat. xvi., 1829, p. 70.

Nucras delalandii, Bouleng., *t.c.*, p. 53.

Cape Colony, Natal, Transvaal, Zululand, Damaraland.

Cape Colony : Knysna (Maritz) ; Kentani (Kolbe) ; Uitenhage (Fairbridge) ; Port Elizabeth (Moorhouse) ; Burghersdorp (Kannemeyer) ; East London (Wood) ; Encobo (Weisbecker) ; West Pondoland (Weisbecker).

Basutoland : Morija (Dyke).

Natal : Umvoti (Fry).

Transvaal : Johannesburg (Ross).

3. TROPIDOSAURA.

Fitzing. N. Class. Rept. p. 22 ; Bouleng. Cat. Liz. iii. p. 50.

1. TROPIDOSAURA MONTANA, Dum. and Bibr. Erp. Gén. v. p. 172 ;

Bouleng., *t.c.*, p. 51.

Southern parts of Cape Colony.

Cape Town (French).

3. ICHNOTROPIS.

Peters, Mon. Berl. Ac., 1854, p. 617 ; Bouleng. Cat. Liz. iii. p. 78.

Three Species.

A. Frontonasal single ; subocular bordering the lip.

Hind limb not reaching the ear *I. capensis*.

Hind limb reaching the ear or beyond *I. longipes*.

B. Frontonasal divided into two by a longitudinal suture ; sub-

ocular separated from the lip by the upper labials *I. squamulosa*.

1. *ICHNOTROPIS CAPENSIS*.

Algyra capensis, Smith, Mag. N. H. ii., 1838, p. 94.

Ichnotropis capensis, Bouleng., t.c., p. 78.

Kalahari, Zululand, Transvaal, Rhodesia, Portuguese East Africa, German South Africa, Angola, Congo.

Portuguese East Africa: Delagoa Bay (De Coster).

Transvaal: Pietersburg (Daneel).

Southern Rhodesia: Matoppo Hills (Pillans).

2. *ICHNOTROPIS LONGIPES*, Bouleng. P.Z.S., 1902, ii. p. 17, pl. iii. fig. 2.

Southern and North-Western Rhodesia.

North-Western Rhodesia: Livingstone (Sykes).

3. *ICHNOTROPIS SQUAMULOSA*, Peters, Mon. Berl. Ac., 1854, p. 617; Bouleng. Cat. Liz. iii. p. 79.

Kalahari, Zululand, Rhodesia, Portuguese East Africa, British East Africa.

Portuguese East Africa: Delagoa Bay (De Coster).

Southern Rhodesia: Bulawayo (Pillans); Hanyani River (Thomas); Salisbury (ff. Darling).

4. *EREMIAS*.

Wieg. Herp. Mex. p. 9; Bouleng. Cat. Liz. iii. p. 80.

Six Species in South Africa.

I. Lower eyelid scaly, opaque or slightly transparent.

A. Ventral plates in 6 longitudinal series; supraoculars separated from frontal by granules *E. lugubris*.

B. Ventral plates in 10 longitudinal series or more.

Ventral plates in 10 or 12 longitudinal series; distance between loreal and first supraocular less than length of latter; frontonasal separated from rostral; 60-65 scales across middle of body *E. namaquensis*.

Ventral plates in 14 or 16 longitudinal series; distance between loreal and first supraocular at least equal to length of latter; frontonasal separated from rostral; 65-75 scales across middle of body *E. burchelli*.

Ventral plates in 14 to 18 longitudinal series; distance between loreal and first supraocular at least equal to length of latter; frontonasal usually in contact with rostral; 50-55 scales across middle of body *E. capensis*.

II. Lower eyelid with 2 to 5 large, black-edged scales forming a transparent disk.

Ventral plates in 10 longitudinal series *E. undata*.

Ventral plates in 12 or 14 longitudinal series *E. lineo-ocellata*.

1. EREMIAS LUGUBRIS.

Lacerta lugubris, Smith, Ann. N. H. ii., 1838, p. 93.

Eremias lugubris, Bouleng., t.c., p. 84.

Bechuanaland, Southern Rhodesia, Transvaal, German South Africa, Angola.

Lake Ngami District (Woosnam).

Transvaal: Leydsdorp; Messina (Dr. H. L. Gordon).

2. EREMIAS NAMAQUENSIS, Dum. & Bibr. Erp. Gén. v. p. 307;
Bouleng., t.c., p. 91.

Cape Colony, German South-West Africa, Angola.

Cape Colony: Bredasdorp (Fry); Beaufort West (Jackson); Matatiele (Weisbecker); Little Namaqualand (Péringuey, Schlechter, Turle).

3. EREMIAS BURCHELLI, Dum. & Bibr. Erp. Gén. v. p. 303;
Bouleng., t.c., p. 95.

Cape Colony, Orange River Colony.

Orange River Colony: Smithfield (Kannemeyer).

4. EREMIAS CAPENSIS.

Lacerta capensis, Smith, Mag. N. H., 1838, p. 93.

Eremias capensis, Bouleng., t.c., p. 96.

Cape Colony, German South-West Africa.

Cape Colony: Clanwilliam (L. S. Pattison); Matjesfontein, Worcester Division (Trimen); Hanover (Schreiner); De Aar (Naughton); Little Namaqualand (Schlechter).

5. EREMIAS UNDATA.

Lacerta undata, Smith, Mag. N. H., 1838, p. 93.

Eremias undata, Bouleng., t.c., p. 92.

Eremias inornata, Roux, Zool. Jahrb., Syst. xxv., 1907, p. 427, pl. xv. figs. 1-3.

Cape Colony, German South-West Africa.

Cape Colony: Middelburg (Piers); Little Namaqualand (Schlechter).

German South-West Africa: Luderitzbucht (Gilchrist).

6. EREMIAS LINEO-OCCELLATA, Dum. & Bibr. Erp. Gén. v. p. 314;
Bouleng., t.c., p. 94.

E. pulchella, Gray, Cat. Liz. p. 42; Bouleng., t.c., p. 93.

Cape Colony, Natal, Orange River Colony, Transvaal, German South-West Africa.

Cape Colony: Prince Albert (Purcell); Ceres (Lightfoot); Clan-

william (Schlechter); Tulbagh (Purcell, Lightfoot); Calvinia (Schlechter); Worcester (Purcell); Middelburg (Piers); De Aar (?); Burghersdorp (Kannemeyer); Albany Division (French); Paarl (Lightfoot); Aliwal North (Weisbecker); Matjesfontein (Lightfoot); Hanover (Schreiner, Shortridge); Little Namaqualand (Schlechter).

Orange River Colony : Smithfield (Kannemeyer).

Natal : Durban (Sanderson).

5. SCAPTIRA.

Wiegman. *Herp. Mex.* p. 9; Boulenger. *Cat. Liz.* iii. p. 107.

Five Species in South Africa.

- I. Snout more or less conical, upper labials not forming an angle.

- A. Lower nasal forming a suture with the rostral; ventral plates in 12 or 14 longitudinal series.

Frontonasal separated from the rostral; interparietal usually in contact with an occipital *S. knoxii*.

Frontonasal in contact with the rostral; occipital minute or absent *S. depressa*.

- B. Lower nasal separated from the rostral; ventral plates in 16 or 18 longitudinal series *S. serripes*.

- II. Snout wedge-shaped, upper labials forming an angle; lower nasal forming a suture with the rostral.

20 to 24 ventral plates across middle of body; frontonasal separated from the rostral *S. ctenodactyla*.

26 to 30 ventral plates across middle of body; frontonasal in contact with the rostral *S. cuneirostris*.

1. SCAPTIRA KNOXII.

Lacerta knoxii, M.-Edw. *Ann. Sc. Nat.* xvi., 1829, p. 76.

Scaptira knoxii, Boulenger, *t.c.*, p. 109.

Cape Colony, Natal, German South-West Africa.

Cape Colony : Cape Town (de Souza); Cape Division (French);

Clanwilliam (Leipoldt); Calvinia (Leipoldt); Matjesfontein,

Worcester Division (Lightfoot); Touw's River (Paynter);

Little Namaqualand (Péringuey, Schlechter).

Natal : Durban (Bowker).

2. SCAPTIRA DEPRESSA.

Lacerta depressa, Merrem, *Tent. Herp.* p. 63.

Scaptira depressa, Boulenger, *t.c.*, p. 110.

Eremias suborbitalis, Peters, *Cefvers. Vet. Ak. Förh.*, 1869, p. 658;

Boulenger, *t.c.*, p. 90

Cape Colony, German South-West Africa.

Cape Colony : Little Namaqualand (Schlechter).

3. SCAPTIRA SERRIPES.

Eremias serripes, Peters, Œfvers. Vet. Ak. Förh., 1869, p. 659.

Scaptira serripes, Bouleng., *t.c.*, p. 111.

Little Namaqualand, German South-West Africa, Benguela.

Cape Colony : Little Namaqualand (Péringuey).

4. SCAPTIRA CTENODACTYLA.

Lacerta ctenodactylus, Smith, Mag. N. H. (2) ii., 1838, p. 93.

Scaptira ctenodactyla, Bouleng., *t.c.*, p. 115.

Cape Colony, German South-West Africa.

Cape Colony : Little Namaqualand (Scully, Péringuey).

5. SCAPTIRA CUNEIROSTRIS, Strauch, Mél. Biol. Ac. St. Pétersb. vi., 1867, p. 411 ; Bouleng., *t.c.*, p. 116.

Damaraland.

6. APOROSAURA.

Bouleng. Cat. Liz. iii. p. 117.

1. APOROSAURA ANCHIETÆ.

Pachyrhynchus anchiætæ, Bocage, Ann. & Mag. N. H. (3) xx., 1867, p. 226.

Aporosaura anchiætæ, Bouleng., *t.c.*

German South-West Africa, Angola.

FAMILY GERRHOSAURIDÆ.

Tongue moderately long, with scale-like papillæ or oblique plicæ. Dentition pleurodont. Upper surface of head with large symmetrical shields. Body with large shields over bony plates, and a lateral fold covered with granules. Femoral pores present.

Three Genera in South Africa.

Tongue nearly entirely covered with imbricate scale-like papillæ ; præfrontal shields present ; lower eyelid scaly *Gerrhosaurus*.

Tongue nearly entirely covered with oblique plicæ ; no præfrontal shields ; lower eyelid scaly ; limbs short or rudimentary *Tetradactylus*.

Tongue nearly entirely covered with imbricate scale-like papillæ ; no præfrontal shields ; lower eyelid with a large transparent disk *Cordylosaurus*.

1. GERRHOSAURUS.

Wieg. Isis, 1828, p. 378; Bouleng. Cat. Liz. iii. p. 120.

Six Species in South Africa.

- I. Ventral shields in 14 or 16 longitudinal series; tympanic shield large, crescentic; 18 to 21 femoral pores on each side *G. validus*.
 II. Ventral shields in 10 longitudinal series; frontonasal usually in contact with the rostral.
 Tympanic shield narrow; 12 or 13 femoral pores on each side *G. grandis*.
 Tympanic shield large, crescentic; dorsal shields unicarinate; 15 to 18 femoral pores on each side *G. typicus*.
 III. Ventral shields in 8 longitudinal series; nasals usually in contact with each other behind the rostral.
 Tympanic shield large, crescentic; head (measured to ear) $4\frac{1}{2}$ to $5\frac{1}{2}$ times in length from snout to vent; 14 to 18 femoral pores on each side *G. auritus*.
 Tympanic shield narrow; head $4\frac{1}{2}$ to 5 times in length from snout to vent in adult; præfrontals forming a long median suture; 14 to 20 femoral pores on each side *G. nigrolineatus*.
 Tympanic shield narrow; head 5 to $6\frac{1}{2}$ times in length from snout to vent in adult; frontonasal usually in contact with frontal, or præfrontals forming a short suture; 10 to 15 femoral pores on each side *G. flavigularis*.

1. GERRHOSAURUS VALIDUS, Smith, Ill., Rept., App. p. 9; Bouleng., *t.c.*, p. 121.
Transvaal, Rhodesia, Portuguese East Africa, Angola.
2. GERRHOSAURUS GRANDIS, Bouleng. Ann. Natal Mus. i., 1908, p. 233, pl. xxxvi.
Zululand.
3. GERRHOSAURUS TYPICUS, Smith, Mag. Zool. i., 1837, p. 143; Bouleng., *t.c.*, p. 123.
North-western parts of Cape Colony.
Little Namaqualand (Péringuey).
4. GERRHOSAURUS AURITUS, Boettg. Ber. Senck. Ges., 1886-87, p. 148, pl. v. fig. 3.
Kalahari, Ovamboland, Angola.
5. GERRHOSAURUS NIGROLINEATUS, Hallow. Proc. Ac. Philad., 1857, p. 49; Bouleng., *t.c.*, p. 122.
Kalahari, Southern Rhodesia, Angola to Gaboon and Uganda.
Southern Rhodesia: Hunyani River (Thomas); Victoria Falls (Kirkman).
6. GERRHOSAURUS FLAVIGULARIS, Wieg. Isis, 1828, p. 379; Bouleng., *t.c.*, p. 122.

Cape Colony, Natal, Zululand, Orange River Colony, Transvaal, Rhodesia, East Africa to Abyssinia.

Cape Colony: Cape Town (De Souza); Knysna (Maritz); Port Alfred (Becker); Transkei (Bowker); Port St. Johns (Shortridge); Robertson (Melle); Port Elizabeth (Moorhouse); Serowe, Bechuanaland (Blackbeard).

Transvaal: Johannesburg (Ross).

Southern Rhodesia: Mazoe, Mashonaland (ff. Darling).

2. TETRADACTYLUS.

Merrem, Tent. Syst. Amph. p. 75; Bouleng. Cat. Liz. iii. p. 124.

Four Species.

Limbs short but well developed, pentadactyle	<i>T. seps.</i>
Limbs very short, tetradactyle	<i>T. tetradactylus.</i>
Limbs minute, anterior didactyle, posterior undivided	<i>T. breyeri.</i>
Limbs minute, undivided	<i>T. africanus.</i>

1. TETRADACTYLUS SEPS.

Lacerta seps, Linn. S. N. i. p. 363.

Tetradactylus seps, Bouleng., *t.c.*, p. 124.

Southern parts of Cape Colony.

Cape Colony: Cape Town (De Souza); Robben Island (Oakley); Knysna (Maritz); Paarl Division (Du Plessis).

2. TETRADACTYLUS TETRADACTYLUS.

Lacerta tetradactyla, Lacep. Ann. Mus. ii., 1803, p. 351.

Tetradactylus tetradactylus, Bouleng., *t.c.*, p. 125.

Cape Colony.

Cape Colony: Cape Division (Purcell); Robertson (Melle); Worcester Division (R. Franke); Namaqualand (?)

3. TETRADACTYLUS BREYERI, Roux, Zool. Jahrb., Syst. xxv., 1907, p. 430, pl. xiv. fig. 6.

Transvaal.

4. TETRADACTYLUS AFRICANUS.

Caitia africana, Gray, Ann. N. H. i., 1838, p. 389.

Tetradactylus africanus, Bouleng., *t.c.*, p. 125.

Northern and eastern parts of Cape Colony, Natal, Zululand, Angola.

Cape Colony: Little Namaqualand (Péringuey).

Natal: Durban (Bowker); Umvoti (Fry).

3. CORDYLOSAURUS.

Gray, P.Z.S., 1865, p. 641 ; Bouleng. Cat. Liz. iii. p. 126.

Two Species, which may have to be united.

Dorsal shields feebly or more or less strongly keeled *C. trivittatus*.
Dorsal shields nearly smooth *C. subtessellatus*.

1. CORDYLOSAURUS TRIVITTATUS.

Gerrhosaurus trivittatus, Peters, Mon. Berl. Ac., 1862, p. 18.

Cordylus trivittatus, Bouleng., l.c.

Northern parts of Cape Colony and German South-West Africa.

Cape Colony: Little Namaqualand (Scully); Clanwilliam Division (Schlechter); Calvinia Division (Schlechter).

2. CORDYLOSAURUS SUBTESSELLATUS.

Gerrhosaurus subtessellatus, Smith, Ill., Rept. pl. xli. fig. 2.

Cordylus subtessellatus, Bouleng., l.c.

Great Namaqualand.

Loc. (?) No history.

FAMILY SCINCIDÆ.

Tongue moderately long, with scale-like papillæ. Dentition pleurodont. Upper surface of head with large symmetrical shields. Body with imbricate scales over bony plates. No femoral pores.

This family includes the *Anelytropidæ*.

Eight Genera in South Africa.

I. Nostril in a small or moderate-sized nasal, well separated from the rostral; præfrontals and frontoparietals present.

Movable eyelids, the lower with a transparent disk; scales tri- or quinque carinate *Mabuia*.

Movable eyelids, the lower scaly; limbs short; scales smooth or feebly tricarinate *Lygosoma*.

No movable eyelids; scales smooth *Ablepharus*.

II. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; scales smooth; limbs weak or absent; præfrontals and frontoparietals very small or absent.

First upper labial not entering the nostril; palatine bones meeting on the middle line *Scelotes*.

First upper labial not entering the nostril; palatine bones not meeting on the middle line *Herpetosaura*.

First upper labial entering the nostril; palatine bones not meeting on the middle line *Sepsina*.

III. Nostril pierced in the anterior part of the very large rostral, with the posterior border of which it is connected by a longitudinal cleft; scales smooth; limbs absent.

Eye very small, with lower lid	<i>Acontias</i> .
Eye concealed under the shields	<i>Typhlosaurus</i> .

1. MABUIA.

Fitzing. N. Class. Rept. p. 23; Bouleng. Cat. Liz. iii. p. 150.

Synopsis of the South African Species.

I. Subdigital lamellæ and scales on soles smooth or tubercularly keeled.

A. 28 to 32 scales round the body; anterior border of ear with 2 or 3 long pointed lobules.

Frontonasal in contact with frontal; a light lateral streak, passing through the ear	<i>M. homalocephala</i> .
Fræfrontals usually forming a median suture; no light lateral streak	<i>M. peringueyi</i> .

B. 34 or 36 scales round the body; anterior border of ear with 3 short rounded lobules *M. gruetzneri*.

II. Subdigital lamellæ keeled; scales on soles often keeled or spinose, especially in the young.

A. Subocular not narrowed inferiorly, similar in shape to the upper labials.

Snout pointed; 36 to 44 scales round the body; ear-opening with 3 to 5 short obtusely pointed lobules anteriorly	<i>M. quinquetæniata</i> .
Snout very obtuse; 30 to 36 scales round the body; scales on anterior border of ear not differentiated	<i>M. trivittata</i> .
Snout very obtuse; 30 or 32 scales round the body; 2 or 3 large projecting auricular lobules	<i>M. occidentalis</i> .

B. Subocular narrowed inferiorly, or not reaching the lip.

1. Snout normal.

a. Ear-opening partly concealed under long pointed lobules; lower border of subocular usually more than one-third the length of the upper; 30 to 34 scales round the body.

Hind limb not reaching the axil; a light lateral streak passing through the ear	<i>M. varia</i> .
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Hind limb reaching the axil.	<i>M. hildebrandti</i> .
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b. Ear-opening largely exposed, ear-lobules very short; lower border of subocular, if reaching the lip, not more than one-third the length of the upper; 32 to 40 scales round the body.

Scales mostly tricarinate, sometimes quincquecarinate; a more or less distinct light lateral band, proceeding from above the eye	<i>M. striata</i> .
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Scales quincquecarinate; head and body remarkably depressed; brown above, uniform or spotted with black, uniform black, or light with six dark longitudinal bands	<i>M. sulcata</i> .
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2. Snout much depressed, with deeply concave sides, sharp canthus rostralis, and angularly projecting upper labials; ear-lobules long; 28 to 32 scales round the body *M. acutilabris*.

1. *MABUIA HOMALOCEPHALA*.

Euprepes homalocephalus, Wiegman, Isis, 1828, p. 374.

Mabuia homalocephala, Boulenger, Cat. Liz. iii. p. 170.

Cape Colony, Natal, Zululand, Transvaal, Southern Rhodesia.

Cape Colony: Cape Division (De Souza, French); Robben Island (Oakley); Knysna (Moritz); Bredasdorp (Fry); Little Namaqualand (Péringuey).

Natal: Pinetown (Bowker).

Transvaal: Johannesburg (Cregoe).

2. *MABUIA PERINGUEYI*, Boulenger, Ann. & Mag. N. H. (6) ii., 1888, p. 139.

Little Namaqualand, German South-West Africa.

Cape Colony: Little Namaqualand (Péringuey).

German South-West Africa: Damaraland (Marloth).

3. *MABUIA GRUETZNERI*.

Euprepes gruetzneri, Peters, Mon. Berl. Ac., 1869, p. 433.

Mabuia gruetzneri, Boulenger, Cat. Liz. iii. p. 171.

Portuguese East Africa.

4. *MABUIA QUINQUETENIATA*.

Scincus quinqueteniatus, Lichtenstein, Verz. Doubl. Mus. Berl. p. 103.

Mabuia quinqueteniata, Boulenger, Cat. Liz. iii. p. 198.

Egypt and Arabia to Southern Rhodesia and Zululand.

Southern Rhodesia: Matoppo Hills (Pillans); Hunyani River (Thomas).

5. *MABUIA TRIVITTATA*.

Scincus trivittatus, Cuv. R. An., 2nd ed. ii. p. 62.

Mabuia trivittata, Boulenger, Cat. Liz. iii. p. 195.

Mabuia calaharica, Werner, Jen. Zeitschr. xvi., 1910, p. 350, pl. viii. fig. 11.

Cape Colony, Natal, Orange River Colony, Transvaal, German South-West Africa, Southern Rhodesia.

Cape Colony: Cape Division (Butler, Oakley, Picton); Worcester Division (Purcell); Calvinia (Leipoldt); King William's Town (Selater); George (Leipoldt); Caledon Division (Burgess); Robertson (Melle); Mount Ayliff (Weisbecker); Burghersdorp (Kannemeyer); Little Namaqualand (Péringuey, Warden, Turle, Schlechter).

Natal: Durban (Bowker).

Orange River Colony : Smithfield (Kannemeyer) ; Vredefort Road (Barrett-Hamilton).

Transvaal : Johannesburg (Cregoe, Ross) ; Krugersdorp, (Watson).

6. *MABUIA OCCIDENTALIS*.

Euprepes occidentalis, Peters, Mon. Berl. Ac., 1867, p. 20.

Mabuia occidentalis, Bouleng. Cat. Liz. iii. p. 196.

Little Namaqualand, German South-West Africa.

Cape Colony : Little Namaqualand (Péringuey, Schlechter).

German South-West Africa : Damaraland (Marloth).

7. *MABUIA VARIA*.

Euprepes varius, Peters, Mon. Berl. Ac., 1867, p. 20.

Mabuia varia, Bouleng. Cat. Liz. iii. p. 202.

South Africa, Angola, East Africa.

Cape Colony : King William's Town (Schlater) ; Calvinia (Leipoldt) ; George (Leipoldt) ; Caledon Division (Burgess) ; Robertson (Melle) ; Port St. Johns (Weisbecker) ; Mount Ayliff (Weisbecker) ; Albany Division (French) ; Graaff-Reinet (Paynter) ; Little Namaqualand (Péringuey, Warden, Turle, Schlechter) ; Hanover (Schreiner).

Orange River Colony : Smithfield (Kannemeyer).

Transvaal : Johannesburg (Cregoe, Ross).

Southern Rhodesia : Salisbury (Marshall, Pillans, Thomas) ; Lomagundi (Drury).

Bechuanaland : Serowe (Blackbeard).

German South-West Africa : Damaraland (Marloth).

8. *MABUIA HILDEBRANDTI*.

Euprepes hildebrandti, Peters, Mon. Berl. Ac., 1874, p. 372, pl. —, fig. 4.

Mabuia hildebrandti, Bouleng. Cat. Liz. iii. p. 207 ; Werner, Jen. Zeitschr. xvi., 1910, p. 347, pl. vii. fig. 5.

Somaliland, German South-West Africa.

Cape Colony : Little Namaqualand (Péringuey).

German South-West Africa : Windhoek (Gilchrist).

9. *MABUIA STRIATA*.

Tropidolepisma striatum, Peters, Mon. Berl. Ac., 1844, p. 36.

Euprepes wahlbergii, Peters, Öfvers. Vet. Ak. Förh., 1869, p. 661.

Mabuia striata and *wahlbergii*, Bouleng. Cat. Liz. iii. pp. 204, 205.

Northern parts of Cape Colony, Natal, Zululand, Orange River Colony, Transvaal, Portuguese East Africa, Southern Rhodesia, German South-West Africa, Central and East Africa.

Cape Colony : De Aar (?) ; Little Namaqualand (Schlechter).
 Transvaal : Johannesburg (Cregoe, Ross) ; Barberton (Rendall) ;
 Leydsdorp (Naughton).
 Southern Rhodesia : Bulawayo (Kolbe) ; Matoppos Hills (Pillans) ;
 Lomagundi (Drury) ; Salisbury (Marshall) ; Mazoe (ff. Darling).
 Portuguese East Africa : Delagoa Bay (De Coster).

10. *MABUIA SULCATA*.

Euprepes sulcatus, Peters, Mon. Berl. Ac., 1867, p. 20.

Mabuia sulcata, Bouleng. Cat. Liz. iii. p. 206.

Cape Colony, German South-West Africa.

Cape Colony : Cape Town (Layard) ; Prince Albert (Purcell) ;
 Matjesfontein (Lightfoot) ; Little Namaqualand (Péringuey,
 Broom, Warden).

Natal : Durban (Saunderson).

11. *MABUIA ACUTILABRIS*.

Euprepes acutilabris, Peters, Mon. Berl. Ac., 1862, p. 19.

Mabuia acutilabris, Bouleng. Cat. Liz. iii. p. 208.

Little Namaqualand, German South-West Africa, Angola.

Cape Colony : O'okiep, Little Namaqualand (Warden).

German South-West Africa : Damaraland (Marloth) ; Walvisch
 Bay (Nightingale).

2. *LYGOSOMA*.

Gray, Zool. Journ. iii., 1828, p. 228 ; Bouleng. Cat. Liz. iii. p. 209.

1. *LYGOSOMA SUNDEVALLII*.

Eumeces sundevallii, Smith, Ill., Rept., App. p. 11.

Lygosoma sundevallii, Bouleng., *t.c.*, p. 307.

Natal, Transvaal, Southern Rhodesia, Portuguese East Africa,
 German South-West Africa, Tropical Africa.

Southern Rhodesia : Salisbury (Marshall).

German South-West Africa : Damaraland (Du Plessis).

3. *ABLEPHARUS*.

Fitzing. Verh. Ges. Naturf. Fr. i., 1824, p. 297 ; Bouleng. Cat. Liz.
 iii. p. 344.

1. *ABLEPHARUS WAHLBERGII*.

Cryptoblepharus wahlbergii, Smith, Ill., Rept., App. p. 10.

Ablepharus wahlbergii, Bouleng., *t.c.*, p. 350.

South Africa, Angola, Central and East Africa.

Natal : Malvern (Bowker).

Transvaal : Johannesburg (Ross).

4. SCELOTES.

Fitzing. N. Class. Rept. p. 23 ; Bouleng. Cat. Liz. iii. p. 408.

Eight Species in South Africa.

I. Both pairs of limbs present.

Limbs pentadactyle ; 22 scales round the body *S. capensis*.

Limbs tridactyle ; second and third fingers equal ; 20 scales round the body *S. caffer*.

Limbs tridactyle ; third finger shorter than second ; 18 scales round the body *S. tridactylus*.

II. Fore limbs absent ; 18 or 20 scales round the body.

Hind limb didactyle ; supranasal in contact with the first labial . . *S. bipes*.

Hind limb monodactyle ; supranasal in contact with the first labial *S. gronovii*.

Hind limb represented by a bud-like rudiment ; a postnasal between the supranasal and the first labial *S. guentheri*.

III. No trace of limbs externally ; supranasal in contact with the first labial.

Four supraoculars, three in contact with the frontal ; body cylindrical *S. inornatus*.

Three supraoculars ; body subquadrangular *S. bicolor*.

1. SCELOTES CAPENSIS.

Gongylus capensis, Smith, Ill., Rept., App. p. 10.

Scelotes capensis, Bouleng., t.c., p. 412, pl. xxxiv. fig. 1.

"Western coast of South Africa."

2. SCELOTES TRIDACTYLUS, Bouleng., t.c., p. 413, pl. xxxiv. fig. 2.

Cape Colony : Little Namaqualand (Schlechter) ; Bushmanland (Alston).

3. SCELOTES CAFFER.

Sepomorphus caffer, Peters, Mon. Berl. Ac., 1861, p. 422.

Scelotes caffer, Bouleng., t.c., p. 413.

Cape Colony : Dunbrody (J. O'Neil).

4. SCELOTES BIPES.

Anguis bipes, Linn. S. N. i. p. 390.

Scelotes bipes, Bouleng., t.c., p. 414.

Cape Colony, German South-West Africa.

Cape Colony : Cape Division (Selater, Purcell, Beard) ; Robben Island (Oakley, Lightfoot) ; Calvinia (Leipoldt) ; Clanwilliam (Lightfoot, Slabber).

Portuguese East Africa : Delagoa Bay (De Coster).

5. SCELOTES GRONOVII.

Seps gronovii, Daud. Hist. Rept. iv. p. 354.

Scelotes gronovii, Bouleng., P.Z.S., 1898, p. 918.

Cape Colony: Dassen Island (Spencer).

6. SCELOTES GUENTHERI, Bouleng. Cat. Liz. iii. p. 414, pl. xxxiv. fig. 3.
Natal, Zululand.

7. SCELOTES INORNATUS.

Lithophilus inornatus, Smith, Ill., Rept., App. p. 12.

Scelotes inornatus, Bouleng., t.c., p. 415, pl. xxxiv. fig. 4.

"Interior of South Africa," Natal.

8. SCELOTES BICOLOR.

Lithophilus bicolor, Smith, l.c., p. 13.

Scelotes bicolor, Bouleng., t.c., p. 416.

Cape Colony: Little Namaqualand.

5. HERPETOSAURA.

Peters, Mon. Berl., 1854, p. 619.

Three Species.

Limbs present, pentadactyle; ear distinct *H. mira*.

Limbs absent; ear hidden; 4 supracoculars.. .. . *H. anguina*.

Limbs absent; ear hidden; 3 supracoculars.. .. . *H. arenicola*.

1. HERPETOSAURA MIRA, Roux, Zool. Jahrb., Syst., xxv., 1907,
p. 435, pl. xiv. figs. 7 and 8.
Transvaal.

2. HERPETOSAURA ANGUINA.

Herpetoseps anguinus, Bouleng. Cat. Liz. iii. p. 416, pl. xxxv. fig. 1.
Cape Colony.

Cape Colony: Port Elizabeth (Leslie); Peddy Coast (Albany
Museum); Dunbrody, Uitenhage Division (O'Neil).

3. HERPETOSAURA ARENICOLA, Peters, Mon. Berl. Ac., 1854, p. 619.

Scelotes arenicola, Bouleng. Cat. Liz. iii. p. 145.

Zululand, Portuguese East Africa.

Portuguese East Africa: Delagoa Bay (De Coster).

6. SEPSINA.

Bocage, Journ. Sc. Lisb. i., 1866, p. 62; Bouleng. Cat. Liz. iii. p. 417.

Two Species in South Africa.

Limbs pentadactyle *S. weberi*.

Limbs tridactyle *S. grammica*.

1. SEPSINA WEBERI, Roux, Zool. Jahrb., Syst., xxv., 1907, p. 437, pl. xiv. fig. 9.
Little Namaqualand.
2. SEPSINA GRAMMICA, Cope, Proc. Ac. Philad., 1868, p. 318.
"South-West coast of Africa."

7. ACONTIAS.

Cuvier, R. An. ii. p. 60; Bouleng. Cat. Liz. iii. p. 424.

Three Species in South Africa.

Snout rounded, moderately projecting; the distance between the anterior corner of the eye and the nostril does not exceed the length of the rostral shield; the width of the large anal plate exceeds the distance between the frontal and the tip of the snout; belly yellowish *A. meleagris*.
 Snout rounded, moderately projecting; the distance between the anterior corner of the eye and the nostril exceeds the length of the rostral shield; the width of the large anal plate does not exceed the distance between the frontal and the tip of the snout; uniform dark brown or blackish *A. plumbeus*.
 Snout subcuneiform, much depressed, strongly projecting: 14 scales round the body *A. lineatus*.

1. ACONTIAS MELEAGRIS.

Anguis meleagris, Linn. S. N. i. p. 390.

Acontias meleagris, Bouleng., *t.c.*, p. 427.

Cape Colony: Cape Division (Oakley, Layard, Purcell); Grahamstown (Schönland, Ivy); Robben Island (Oakley, Lightfoot); Burghersdorp (Kannemeyer); Port Elizabeth (Cregoe, Moorhouse); Bedford Division (Tucker, Stephenson); Malmesbury (Gird); Graaff-Reinet (Paynter); Tsomo, Transkei (Bowker); Clanwilliam (Leipoldt); Uitenhage (Drege); Goudini, Worcester Division (Franke); Robertson Division (Melle, Groom); Umtata (Kolbe); Little Namaqualand (Péringuey, Howard).

Portuguese East Africa: Delagoa Bay (De Coster).

2. ACONTIAS PLUMBEUS, Bianconi, Spec. Zool. Mossamb., Rept. p. 35, pl., iii.; Bouleng., *t.c.*, p. 428.

Eastern parts of Cape Colony, Zululand, Portuguese East Africa. Cape Colony: East London (Wood).

Portuguese East Africa: Delagoa Bay (De Coster).

3. ACONTIAS LINEATUS, Peters, Mon. Berl. Ac. 1879; p. 774, pl. —, fig. 2; Bouleng., *t.c.*, p. 428.

A. grayi, Bouleng., *l.c.*

Cape Colony: Cape Town (?); Malmesbury (Gird); Clanwilliam (Leipoldt); Port Elizabeth (Drege); Dunbrody, Uitenhage Division (O'Neil); Van Ryn's Dorp (A. W. Rogers); Little Namaqualand (Péringuey, Turle, Schlechter, Strauss).

8. TYPHLOSAURUS.

Wieg. Herp. Mex. p. 11; Bouleng. Cat. Liz. iii. p. 432.

Six Species.

- I. Rostral not longer than the other head-shields together.
 16 scales round the body; three azygous shields on the head, behind the rostral. *T. cregoi*.
 14 scales round the body; two azygous shields on the head, behind the rostral *T. lineatus*.
 12 scales round the body; two azygous shields on the head, behind the rostral *T. aurantiacus*.
 - II. Rostral a little longer than the other head-shields together; interparietal shorter than frontal; 14 scales round the body *T. meyeri*.
 - III. Rostral at least twice as long as the other head-shields together.
 14 scales round the body *T. cæcus*.
 12 scales round the body *T. vermis*.
1. TYPHLOSAURUS CREGOI, Bouleng. Ann. & Mag. N. H. (7) xii., 1903, p. 434.
 Transvaal.
 2. TYPHLOSAURUS LINEATUS, Bouleng. Cat. Liz. iii. p. 432, pl. xxxviii. fig. 3.
 Southern Rhodesia, Little Namaqualand.
 Loc. (?) No history.
 3. TYPHLOSAURUS AURANTIACUS.
Typhline aurantiaca, Peters, Mon. Berl. Ac., 1854, p. 620.
Typhlosaurus aurantiacus, Bouleng., *t.c.*, p. 433.
 Zululand, Portuguese East Africa.
 Loc. (?) No history.
 4. TYPHLOSAURUS MEYERI, Boettg. Abh. Mus. Dresd., 1892-93, No. 5 (1894).
 German South West Africa.
 5. TYPHLOSAURUS CÆCUS.
Acontias cæcus, Cuvier, R. An. ii. p. 60.
Typhlosaurus cæcus, Bouleng., *t.c.*, p. 434.
 Cape District.
 6. TYPHLOSAURUS VERMIS, Bouleng., *t.c.*, p. 434, pl. xxxviii. fig. 4.
 Cape Colony: Little Namaqualand (Lightfoot, Howard).

RHIPTOGLOSSA.

FAMILY CHAMÆLEONTIDÆ.

Tongue club-shaped, projectile. Dentition acrodont. Digits arranged in two bundles, forming a grasping organ. Tail prehensile. Head and body covered with granular or tubercular scales.

Two Genera in South Africa.

Claws simple; tail at least as long as trunk *Chamæleon*.
Claws bicuspid; tail short *Rhampholeon*.

1. CHAMÆLEON.

Laurenti, Syn. Rept. p. 45; Bouleng. Cat. Liz. iii. p. 438.

Synopsis of the South African Species.

- I. A series of white enlarged conical granules forms a gulo-ventral crest from chin to vent; body uniformly granulate; movable dermal lobes behind the occiput.
 - Occipital lobes small, just meeting behind the occiput *C. quilenis*.
 - Occipital lobes large, in contact on the median line in the adult *C. dilepis*.
- II. A gular crest, no ventral crest; no occipital lobes; granules of body intermixed with enlarged tubercles.
 - A. Gular crest formed of conical or compressed pointed tubercles, not covered with scales or granules.
 - Tubercles of gular crest conical; scales on tail nearly uniform granules *C. melanocephalus*.
 - Tubercles of gular crest long, thin, compressed *C. gutturalis*.
 - B. The anterior tubercles or lobes of the gular crest covered with granular scales.
 1. Tail not longer than head and body, often shorter.
 - Gular crest formed of small, subconical lobules; tail shorter than head and body *C. tæniobronchus*.
 - Gular crest formed of compressed lobes, all longer than broad and not overlapping; tail as long as or a little shorter than head and body *C. pumilus*.
 - Gular crest formed of compressed lobes, the anterior very large and overlapping or disposed in an alternating series; tail considerably shorter than head and body *C. ventralis*.
 2. Tail considerably longer than head and body in the males; anterior lobes of gular crest at least as broad as long.
 - Dorsal crest a serrated ridge *C. damaranus*.
 - Dorsal crest formed of 14 or 15 very large conical tubercles *C. caffer*.
- III. Neither gular nor ventral crest; body uniformly granulate; a series of isolated, knob-like, very large tubercles along the spine *C. namaquensis*.

1. CHAMÆLEON QUILSENSIS.
Chamæleon dilepis, var. *quilensis*, Bocage, Journ. Sc. Lisb. i, 1866,
 p. 59.
Chamæleon parvilobus, Bouleng., *t.c.*, p. 449.
 Tropical and South Africa.
 Cape Colony: Kimberley (Kilgour).
 Natal: Durban (Butler).
 Transvaal: Barberton (Rendall); Pietersburg (Daneel).
 Portuguese East Africa: Delagoa Bay (De Coster).
 German South-West Africa: Damaraland (Marloth).
2. CHAMÆLEON DILEPIS, Leach, in Bowdich, Ashantee, p. 493;
 Bouleng., *t.c.*, p. 450.
 Tropical Africa, Southern Rhodesia, Portuguese East Africa.
 Southern Rhodesia: Mazoe (ff. Darling); Salisbury (ff. Darling);
 Importuni District (Pillans).
3. CHAMÆLEON MELANOCEPHALUS, Gray, P.Z.S., 1864, p. 474, fig.;
 Bouleng., *t.c.*, p. 457.
 Cape Colony, Natal.
4. CHAMÆLEON GUTTURALIS, Smith, Ill., Rept., App. p. 3.
 "South Africa."
 Only known from Smith's description.
5. CHAMÆLEON TENIOBRONCHUS, Smith, S. Afr. Quart. Journ. No. 5,
 1831, p. 17; Bouleng., *t.c.*, p. 458, pl. xl. fig. 1.
 Cape Colony, Natal, Transvaal, Portuguese East Africa.
 Cape Colony: Calvinia (Leipoldt); O'okiep, Little Namaqualand
 (Warden).
6. CHAMÆLEON PUMILUS, Daud. Hist. Rept. v. p. 212; Bouleng.,
t.c., p. 458.
 Cape Colony, Natal, Transvaal.
 Cape Colony: Cape Division (Oakley, Fairbridge, Hugo); Clan-
 william (Lightfoot); Robertson (Hodges, Melle); Port Eliza-
 beth (Moorhouse); Beaufort West (Purcell).
 Transvaal: Barberton (Rendall).
7. CHAMÆLEON VENTRALIS, Gray, Cat. Liz. p. 268; Bouleng., *t.c.*,
 p. 459, pl. xl. fig. 2.
 Cape Colony: Cape Town (Butler); Albany Division (French)
 King Williamstown (Selater); Robertson (Melle); Port Eliza-
 beth (Moorhouse); Somerset East (Broom); Little Namaqua-
 land (Scully, Péringuey, Trimen).

8. CHAMÆLEON DAMARANUS, Bouleng., *t.c.*, p. 460, pl. xl. fig. 3.
Cape Colony, Transvaal, Damaraland.
9. CHAMÆLEON CAFFER, Boettg. Ber. Senck. Ges., 1889, p. 292.
Eastern parts of Cape Colony.
Port St. Johns (Shortridge).
10. CHAMÆLEON NAMAQUENSIS, Smith, S. Afr. Quart. Journ. No. 5,
1831, p. 17; Bouleng., *t.c.*, p. 462.
Northern parts of Cape Colony, German South-West Africa,
Angola.
Cape Colony: Worcester (Lycett); Beaufort West (Lycett);
Sutherland Division (Rogers); Little Namaqualand (Périn-
guey, Scully, Schlechter).
German South-West Africa: Damaraland (Marloth).

2. RHAMPHOLEON.

Günth., P.Z.S., 1874, p. 443; Bouleng., Cat. Liz. iii. p. 475.

1. RHAMPHOLEON MARSHALLI, Bouleng. Ann. & Mag. N. II. (7)
xviii., 1906, p. 346, fig.
Chirinda Forest, South-East Mashonaland.

DESCRIPTIONS OF NEW SPECIES.

PHYLLODACTYLUS PERINGUEYI.

Head flat above, once and a half as long as broad; snout obtusely pointed, a little longer than the distance between the eye and the ear-opening, and nearly twice as long as the orbit; ear-opening small, rounded. Body rather elongate, limbs short; digital expansions rounded, moderately large; subdigital lamellæ well developed. Granular scales on snout keeled; nostril pierced between the rostral and four small scales; rostral twice as broad as deep; 6 or 7 upper and as many lower labials; no chin-shields, only larger flat granules behind the symphysial shield. Back covered with coarse granules intermixed with numerous oval, keeled tubercles; belly covered with flat, subimbricate smooth scales. Pale brownish above, with two more or less distinct dark brown longitudinal bands on each side, the outer passing through the eye; whitish beneath.

Total length, 45 mm. (tail regenerated); from snout to vent, 25; length of head, 7; fore limb, 7; hind limb, 7.

Two specimens: A male from Little Namaqualand (coll. Périn-guey) and a female from Port Elizabeth (coll. Moorhouse).

A very distinct species, without special affinity to any of those previously known.

PACHYDACTYLUS PURCELLI.

Head much depressed; snout a little longer than the orbit; ear-opening oval, oblique. Digits short, feebly dilated distally, the dilated part with 5 or 6 lamellæ. Head and body covered with uniform flat granules, largest on the snout; ventral scales flat, sub-imbricate, larger than dorsals. Rostral nearly twice as broad as deep, entering the nostril; 8 to 10 upper labials; as many lower labials, the anterior as large as or a little larger than the symphysial, which is twice as long as broad. Pale brownish above, with darker marblings or vermicular spots, which may form more or less regular cross-bands.

Total length, 85 mm.; from snout to vent, 40; head, 11; fore limb, 13; hind limb, 16.

Several specimens from Touw's River (coll. Purcell) and from Little Namaqualand (coll. Schlechter).

The very flat head and the position of the nostril well distinguish this species from all its congeners.

ZONURUS MACROPHOLIS.

Head-shields very rugose; nasals not swollen, in contact, the nostril in its posterior part, close to the first upper labial and the anterior loreal; frontonasal tetragonal; præfrontals forming a suture; interparietal tetragonal, between the two pairs of parietals and touching the frontoparietals; temporals strongly keeled, the posterior forming short spines; lower eyelid scaly; four or five upper labials; five lower labials, bordered by four large, striated, and keeled shields; gular scales large, imbricate, strongly keeled, sharply pointed. Dorsal scales very large, forming regular transverse series, rugose, strongly keeled, denticulate posteriorly, the keels terminating in a short spine, on the flanks similar; 17 transverse series from occiput to base of tail, the largest containing 14 scales; a distinct lateral fold. Ventral scales smooth, quadrangular, the outer pointed behind, in 10 longitudinal and about 20 transverse series. A pair of enlarged posterior præanal scales. Limbs with large spinose, serrated scales. 9 femoral pores on each side. Tail with whorls of large, rugose, strongly keeled, spinose, serrated

scales, the spines strongest on the sides. Olive-brown above, with large irregular dark brown blotches, pale olive beneath.

Total length, 130 mm.; from snout to vent, 68; head, 19; fore limb, 25; hind limb, 32.

A single specimen from Little Namaqualand.

ZONURUS TROPIDOGASTER.

Similar to *Z. cordylus*, but no frontonasal, the sutures between the nasal and præfrontals, which are of equal size, forming a cross, and ventral scales feebly keeled. Dorsal scales in 24 longitudinal and 25 transverse series, ventrals in 14 longitudinal and 27 transverse series. 8 femoral pores on each side. Olive-brown above, with irregular darker blotches and a light vertebral stripe, whitish beneath.

From snout to vent, 48 mm.

A single specimen from Barberton, Transvaal, is preserved in the British Museum.

MONOPELTIS DECASTERI.

A single large shield covering the top of the head; snout rounded, seen from above; rostral quadrangular, separating the nasals; ocular very minute, eye not distinct; three upper labials, third very large; symphysial small, followed by a large chin-shield with a pair of smaller ones behind it; three lower labials, third very large. Tail rounded at the end. 193 annuli on the body and 11 on the tail; an annulus in the middle of the body includes 34 segments, 20 dorsal and 14 ventral; the two median ventral segments a little more than twice as broad as long. Pectoral shields four, large, elongate, subequal, as long as the head. A pair of very large anal segments. A præanal pore on each side. Uniform yellowish white in spirit.

Total length, 215 mm.; tail, 10; diameter of body, 6.

A single specimen from Delagoa Bay (coll. De Coster).

MONOPELTIS COLOBURA.

A single large shield covering the top of the head; snout rounded, seen from above; rostral subtriangular, the nasals in contact with each other above it; ocular very small, eye distinguishable; three upper labials, third very large, second longest; symphysial larger than the adjacent lower labials, followed by a large chin-shield with

a pair of smaller ones behind it; three lower labials, third very large. Tail thickened and abruptly truncate at the end. 290 to 320 annuli on the body and 25 to 28 on the tail; an annulus in the middle of the body includes 28 to 32 segments, 18 or 20 dorsal and 10 or 12 ventral; the two median ventral segments much broader than long; the transverse series of segments on the upper surface of the tail more or less angular, the angles directed backwards. Pectoral shields six, large, elongate, median pair broadest and longest, longer than the head, of equal width in its posterior half. Six anal segments. No præanal pores. Uniform yellowish white in spirit.

Total length, 520 mm.; tail, 43; diameter of body, 8; diameter of tail at base, 5; diameter of tail at end, 8.

Three specimens from Sesheke, Barotseland (coll. Rev. L. Jalla).

PART II.—OPHIDIA.

Synopsis of the Families represented in South Africa.

I. Worm-like, with the eyes under the more or less transparent head-shields; mouth very small, either the upper or the lower toothless; body covered with uniform scales.

Lower jaw toothless; ocular shield not bordering the mouth; at least 20 scales round the body *Typhlopidae.*

Upper jaw toothless; ocular shield bordering the mouth; 14 scales round the body.. . . . *Gluconiidæ.*

II. Eyes exposed; both jaws toothed; enlarged ventral shields usually present.

A. Maxillary bone horizontal, not vertically movable; poison-fangs, if present, small or rather small.

Præmaxillary bone toothed; rudiments of hind limbs, usually appearing externally as a claw-like horny spine on each side of the vent; labial shields with pits.. . . . *Boidae.*

No præmaxillary tooth; no rudiments of hind limbs; labial shields without pits *Colubridæ.*

B. Maxillary bone very short, vertically movable, bearing only the poison-fangs, which are usually very large *Viperidæ.*

FAMILY TYPHLOPIDÆ.

A single Genus in South Africa.

1. TYPHLOPS.

Schneid. Hist. Amph. ii. p. 339 : Bouleng. Cat. Sn. i. p. 7.

Ten Species in South Africa.

I. Snout rounded ; 22 or 24 scales round the body.

Præocular much narrower than the ocular, in contact with the second and third labials ; diameter of body 42 to 45 times in total length *T. verticalis.*

Præocular a little narrower than the ocular, in contact with the second labial only ; diameter of body 23 to 30 times in total length *T. fornasinii.*

II. Snout with obtusely angular, not trenchant, horizontal edge.

24 scales round the body ; præocular in contact with the second and third labials ; diameter of body 30 times in total length .. *T. mossambicus.*

30 or 32 scales round the body ; præocular in contact with the second labial only ; diameter of body 24 times in total length ; eye not distinguishable *T. anchietæ.*

30 to 34 scales round the body ; præocular in contact with the second labial (rarely second and third) ; diameter of body 28 to 36 times in total length ; eye distinct *T. bibronii.*

III. Snout with sharp, trenchant, horizontal edge.

A. Snout not hooked (in profile).

28 to 30 scales round body ; diameter of body 35 to 50 times in total length *T. delalandii.*

30 to 38 scales round body ; diameter of body 25 to 35 times in total length *T. mucroso.*

34 to 40 scales round body ; diameter of body 42 to 46 times in total length *T. dinga.*

40 to 44 scales round body ; diameter of body 25 to 30 times in total length *T. schlegelii.*

B. Snout hooked ; 24 or 26 scales round body ; diameter of

body 45 to 57 times in total length *T. schinzi.*

1. TYPHLOPS VERTICALIS.

Onychocephalus verticalis, Smith, Ill., Rept. pl. liv.

Typhlops verticalis, Bouleng., *t.c.*, p. 32.

Interior of South Africa.

Malmesbury (H. Gird).

2. TYPHLOPS FORNASINII, Bianconi, Spec. Zool. Mosamb. p. 13, pl. iii.

fig. 1 ; Bouleng., *t.c.*, p. 38.

Portuguese East Africa.

Delagoa Bay (De Coster).

3. *TYPHLOPS MOSSAMBICUS.*

Onychocephalus mossambicus, Peters, Mon. Berl. Ac., 1854, p. 621.

Typhlops mossambicus, Bouleng., *t.c.*, p. 41.

Portuguese East Africa, Zululand.

4. *TYPHLOPS ANCHIETÆ*, Bocage, Journ. Sc. Lisb. xi. 1886, p. 172 ;

Bouleng., *t.c.*, p. 40.

Angola, Transvaal.

5. *TYPHLOPS BIBRONII.*

Onychocephalus bibronii, Smith, Ill., Rept. pl. li. fig. 2, and liv. figs. 5-8.

Typhlops bibronii, Bouleng., *t.c.*, p. 44.

Cape Colony, Basutoland, Natal.

Cape Colony: Malmesbury (Gird); Bathurst District (Becker);

Port St. Johns (Shortridge); Matatiele, East Griqualand

(Tyrrel); Little Namaqualand (Péringuey).

Basutoland: Morija (Dyke).

Transvaal: Lydenburg (Kilgour).

6. *TYPHLOPS DELALANDII*, Schleg. Abbild. p. 38, pl. xxxii. figs. 17-20 ;

Bouleng., *t.c.*, p. 45.

Cape Colony, Natal, Orange River Colony, Transvaal, Southern Rhodesia.

Cape Colony: Cape Peninsula (Fairbridge, de Souza, Purcell);

Malmesbury (Gird); Burghersdorp (Kannemeyer); Tulbagh

(Kleinschmidt); Prince Albert (Purcell); Knysna (Maritz);

Port Elizabeth (Weale, Drege); Middelburg (Piers); Calvinia

(Leipoldt); Caledon (Burger); Worcester (Purcell, Paynter);

Stellenbosch (Lightfoot); Robertson (Melle); Hanover

(Schreiner); Graaff-Reinet (Paynter); Touw's River, Worcester

District (Purcell); Little Namaqualand (Péringuey).

Orange River Colony: Smithfield (Kannemeyer).

7. *TYPHLOPS MUCRUSO.*

Onychocephalus mucruso, Peters, Mon. Berl. Ac., 1854, p. 621.

Typhlops mucruso, Bouleng., *t.c.*, p. 46.

Tropical Africa to Portuguese East Africa, Southern Rhodesia, and Transvaal.

Transvaal: Barberton (Rendall).

Southern Rhodesia: Salisbury (Darling, Marshall).

Portuguese East Africa: Delagoa Bay (De Coster).

8. *TYPHLOPS DINGA.*

Onychocephalus dinga, Peters, Mon. Berl. Ac., 1854, p. 620.

Typhlops dinga, Bouleng., *t.c.*, p. 45.

Portuguese East Africa, Southern Rhodesia.

9. TYPHLOPS SCHLEGELII, Bianconi, Spec. Zool. Mosamb. p. 13, pl. iii. fig. 2; Bouleng., *t.c.*, p. 44.

East and Central Africa to Portuguese East Africa and Southern Rhodesia.

Delagoa Bay (De Coster).

10. TYPHLOPS SCHINZI, Boettger, Ber. Senck. Ges., 1887, p. 154, pl. v. fig. 1; Bouleng., *t.c.*, p. 47.

Northern parts of Cape Colony.

Little Namaqualand (Turle); Carnarvon (Hanau).

FAMILY GLAUCONIIDÆ.

A single Genus in South Africa.

1. GLAUCONIA.

Gray, Cat. Liz. p. 139; Bouleng. Cat. Sn. i. p. 59.

Six Species in South Africa.

I. Supraocular present.

A. Rostral separated from the supraocular by the upper part of the nasal; diameter of body 40 to 60 times in total length *G. nigricans*.

B. Rostral in contact with the supraocular.

a. Rostral not more than twice the width of the nasal, extending to or slightly beyond a line connecting the posterior borders of the eyes.

Diameter of body 47 to 70 times in total length *G. conjuncta*.

Diameter of body 90 to 110 times in total length *G. gracilior*.

b. Rostral very large, at least twice as broad as the nasal and extending beyond a line connecting the posterior border of the eyes; diameter of body 50 to 80 times in total length.

Snout rounded *G. scutifrons*.

Snout with the præoral part concave, appearing slightly hooked in profile *G. distanti*.

II. No supraocular *G. labialis*.

1. GLAUCONIA NIGRICANS.

Typhlops nigricans, Schleg. Abbild. p. 38, pl. xxxii. figs. 21-24.

Glauconia nigricans, Bouleng., *t.c.*, p. 67.

South Africa.

Cape Colony: Kentani (Kolbe); Swellendam (Fry); Engcobo (Weisbecker); Port Elizabeth (Weale, Drege).

2. *GLAUCONIA CONJUNCTA*.
Stenostoma conjunctum, Jan, Arch. Zool. Anat. Phys. i., 1861,
 p. 189.
Glauconia conjuncta, Bouleng., t.c., p. 67.
 South and East Africa.
 Cape Colony: Swellendam (Fry); Engeobo (Weisbecker);
 Aliwal North (Weisbecker); Burghersdorp (Kannemeyer).
 Basutoland: Korokoro (Selater).
 Natal: Umvoti (Fry).
 Transvaal: Lydenburg (Fry); Modderfontein (Purcell).
3. *GLAUCONIA GRACILIOR*, sp. n.
 Cape Colony.
 Van Rynsdorp (A. W. Rogers); Matjesfontein (Purcell); Clan-
 william (Leipoldt).
4. *GLAUCONIA SCUTIFRONS*.
Stenostoma scutifrons, Peters, Mon. Berl. Ac., 1854, p. 621.
Glauconia scutifrons, Bouleng., t.c., p. 68.
Glauconia latifrons, Sternfeld, Sitzb. Ges. Nat. Fr. Berl., 1908, p. 94.
 South Africa, Angola.
 Cape Colony: Burghersdorp (Kannemeyer).
 Natal: Umvoti (Fry).
 Transvaal: Pietersburg (Daneel).
 Southern Rhodesia: Bulawayo (Kolbe); Matoppo Hills (Pillans);
 Salisbury (Marshall).
5. *GLAUCONIA DISTANTI*, Bouleng. in Distant, Nat. Transv. p. 175,
 fig., and t.c., p. 62.
 Transvaal, Southern Rhodesia, British Central Africa.
 Transvaal: Pretoria (Gough); Pietersburg (Daneel).
 Southern Rhodesia: Palapye, Bechuanaland (Fry).
6. *GLAUCONIA LABIALIS*, Sternfeld, t.c., p. 92.
 German South-West Africa.

FAMILY BOIDÆ.

A single Genus in South Africa.

1. PYTHON.

Daud. Hist. Rept. v. p. 266; Bouleng. Cat. Sn. i. p. 85.

1. PYTHON SEBÆ.

Coluber sebæ, Gmel. S. N. i. p. 1118.

Python sebæ, Bouleng., t.c., p. 86.

Natal, Zululand, Transvaal, Southern Rhodesia, Portuguese East Africa, Tropical Africa.

Natal: Durban (Bowker).

Southern Rhodesia: Salisbury (Thomas).

FAMILY COLUBRIDÆ.

Synopsis of the South African Genera.

I. *Aglyphæ*, without grooved fangs in the upper jaw.—Harmless.

A. Scales smooth, in 19 rows or more.

1. Pupil round; posterior maxillary teeth longest.

Scales in 19 rows; internasal not entering the nostril; snout rounded *Tropidonotus*.

Scales in 27 to 31 rows; internasal entering the nostril; snout with vertical sides, more or less prominent *Pseudaspis*.

2. Pupil vertically elliptic or subelliptic; anal entire.

Scales in 19 rows; frontal at least once and a half as long as broad; maxillary teeth equal *Ablabophis*.

Scales in 19 to 23 rows; frontal broad and short; posterior maxillary teeth shortest *Lamprophis*.

Scales in 23 to 33 rows, with apical pits; anterior maxillary teeth strongly enlarged *Boodon*.

B. Scales smooth, in 15 or 17 rows.

1. Tail short (subcaudals not more than 50 pairs).

Pupil vertically elliptic; rostral small; anterior maxillary teeth longest *Lycophidinum*.

Pupil vertically elliptic; rostral very large, with angular horizontal edge; posterior maxillary teeth strongly enlarged . . . *Prosymna*.

Pupil round; rostral small; nasal single; anterior maxillary teeth longest *Homalosoma*.

2. Tail long (subcaudals more than 80 pairs); pupil round; posterior maxillary teeth longest.

Subcaudals not keeled *Chlorophis*.

Subcaudals keeled and notched *Philothamnus*.

C. Scales keeled; pupil vertically elliptic.

Scales in 15 or 17 rows, of vertebral row enlarged and bicarinate; anterior maxillary teeth longest *Simocephalus*.

Scales in 23 to 27 rows, laterals very oblique and with serrated keels; teeth very small and few *Dasyplectis*.

II. *Opisthoglyphæ*, with grooved fangs at the posterior end of the upper jaw.—More or less poisonous.

A. Eye moderate or large; head more or less distinct from neck.

1. Subcaudals single; pupil vertically elliptic; parietals broken up into small shields *Pythonodipsas*.

2. Subcaudals in pairs.

a. Pupil vertically elliptic; scales in 17 or 19 rows.

Anal divided; loreal separated from the eye by the præocular; maxillary teeth decreasing in size posteriorly *Tarbophis*.

- Anal entire; loreal separated from the eye by the præocular;
maxillary teeth increasing in size posteriorly *Leptodira*.
- Anal entire; loreal entering the eye.. .. . *Chamæortus*.
- b. Pupil round.
- a. Scales smooth (or feebly keeled on the posterior
part of the back) in 13 to 17 rows.
- Rostral moderate; nostril in a single, semidivided nasal *Amplorhinus*.
- Rostral moderate; nostril between two nasals and the internasal;
maxillary teeth subequal *Trimerorhinus*.
- Rostral large, projecting, snout pointed *Rhamphiophis*.
- Rostral moderate; nostril between the nasals; one or two middle
maxillary teeth much enlarged *Psammodon*.
- β. Scales keeled, in 19 or 21 rows; eye very large
Dispholidus.
- c. Pupil horizontal; eye large; scales in 19 rows;
body very slender *Thelotornis*.
- B. Eye small or very small; head not distinct from neck.
1. Subcaudals in pairs; no præocular.
- Scales in 15 rows; no internasals *Amblyodipsas*.
- Scales in 17 or 19 rows; internasals present *Calamclaps*.
2. Subcaudals single.
- Scales in 23 to 27 rows; no præocular *Macrelaps*.
- Scales in 15 rows; nasal in contact with a præocular *Aparallactus*.
- III. *Proteroglyphæ*, with grooved fangs at the anterior end of the
upper jaw.—Poisonous.
- A. Tail compressed, oar-shaped; head narrow and elon-
gate; no distinctly enlarged ventrals (Sea-snakes) *Hydros*.
- B. Tail cylindrical, ending in a point.
1. Head short.
- a. Scales in 17 rows or more; internasal bordering the
nostril.
- Rostral moderate; scales smooth *Naia*.
- Rostral moderate; scales strongly keeled *Sepedon*.
- Rostral very large, detached on the sides; scales smooth or
keeled on posterior part of body *Aspidelaps*.
- b. Scales in 13 or 15 rows.
- Nostril between two nasals; scales in 13 rows; eye small *Elaeochis*.
- Nostril in a single nasal; scales in 15 rows; eye very small *Hemorelaps*.
2. Head narrow, elongate; scales very oblique, in 19 to
25 rows; body slender *Dendraspis*.

A.—AGLYPHÆ.

1. TROPIDONOTUS.

Kuhl, Bull. Sc. Nat. ii., 1824, p. 81; Bouleng. Cat. Sn. i. p. 192.

Two Species in South Africa.

- Ventrals 162–180; anal entire *T. lævissimus*.
- Ventrals 131–149; anal divided *T. olivaceus*.

1. TROPIDONOTUS LÆVISSIMUS.

Natrix lævissima, Günth. Ann. & Mag. N. H. (3) ix., 1862,
p. 124, pl. ix. fig. 4.

Tropidonotus lævissimus, Bouleng., t.c., p. 226.

Grayia lubrica, W. Sclater, Ann. S. Afr. Mus. i., 1898, p. 109,
pl. V, fig. 1.

Cape Colony, Natal.

Tsomo, Transkei District.—Type of *Grayia lubrica*.

2. TROPIDONOTUS OLIVACEUS.

Coronella olivacea, Peters, Mon. Berl. Ac., 1854, p. 622.

Tropidonotus olivaceus, Bouleng., t.c., p. 227.

Tropical Africa to Southern Rhodesia.

Mashonaland : Salisbury (Marshall).

2. ABLABOPHIS.

Bouleng. Cat. Sn. i. p. 318.

1. ABLABOPHIS RUFULUS.

Coronella rufula, Lichtenst. Verz. Doubl. Mus. Berl. p. 105.

Ablabophis rufulus, Bouleng., t.c.

South Africa.

Cape Colony : Cape Town (de Souza, Oakley) ; Robben Island
(Fisk) ; Stellenbosch (Péringuey) ; Knysna (Groom) ; Port St.
Johns (Shortridge) ; Touw's River, Worcester (Le Fèvre) ;
Prince Albert (Purcell) ; Burghersdorp (Kannemeyer) ; Clan-
william (Leipoldt) ; George (Leipoldt) ; Port Elizabeth (Drege,
Moorhouse) ; Albany District (French).

Natal : Durban (Bowker, Sanderson).

Transvaal : Modderfontein (Haagner).

German South-West Africa : Damaraland (Palgrave).

3. LAMPROPHIS.

Smith, Ill., Rept. ; Bouleng. Cat. Sn. i. p. 320.

Four Species.

I. Scales in 23 rows.

Internasals a little shorter than the præfrontals ; loreal a little
longer than deep *L. aurora*.

Internasals much shorter than the præfrontals ; loreal at least
nearly twice as long as deep *L. inornatus*.

Internasals longer than the præfrontals ; loreal as long as deep or a
little longer than deep *L. fiskii*.

II. Scales in 19 rows *L. fuscus*.

1. LAMPROPHIS AURORA.

Coluber aurora, Linn. S. N. i. p. 379.

Lamprophis aurora, Bouleng., *t.c.*, p. 321.

Cape Colony, Orange River Colony, Transvaal.

Cape Colony: Cape Town (Stevens, Gardiner, E. A. Morris)

Burghersdorp (Kannemeyer).

Orange River Colony: Smithfield (Kannemeyer).

Transvaal: Modderfontein (Haagner).

2. LAMPROPHIS INORNATUS, Dum. & Bibr. Erp. Gén. vii. p. 464.

Cape Colony.

Cape Town (French). Also 2655.

3. LAMPROPHIS FISKII, Bouleng. P.Z.S., 1887, p. 398, pl. xxxiv., and *t.c.*, p. 322.

Cape Colony.

Worcester (Le Fèvre).

4. LAMPROPHIS FUSCUS, Bouleng. Cat. Sn. i. p. 322, pl. xx., fig. 4.

Cape of Good Hope.

4. BOODON.

Dum. & Bibr. Mém. Ac. Sc. xxiii., 1853, p. 460; Bouleng. Cat.

Sn. i. p. 327.

Four Species in South Africa.

I. Scales in 23 or 25 rows; three labials entering the eye.

Two postoculars; præocular not extending to upper surface of head; ventrals 175-196.. .. . *B. infernalis.*

Three postoculars; præocular extending to upper surface of head;

ventrals 196-210 *B. guttatus.*

II. Scales in 27 to 33 rows; ventrals 192-237.

Two (rarely three) labials entering the eye; two pairs of chin-shields in contact with each other *B. lineatus.*

Three labials entering the eye; only one pair of chin-shields meeting on the median line *B. mentalis.*

1. BOODON INFERNALIS, Günth. Cat. Col. Sn. p. 199; Bouleng., *t.c.*, p. 330, pl. xxi. fig. 1.

East and South Africa.

Cape Colony: Cape Town (Southey, Oakley); Cape Division (Layard, Southey, Oakley, Selater); Robben Island (Denysson, Péringuey); Knysna (Groom); Port St. Johns (Shortridge); Kimberley (French); King William's Town (Godfrey).

2. BOODON GUTTATUS.

Lycodon guttatus, Smith, Ill., Rept. pl. xxiii.

Boodon guttatus, Bouleng., t.c., p. 331.

Cape Colony.

Cape Town (Layard); O'okiep (Howard); Burghersdorp (Kannemeyer).

3. BOODON LINEATUS, Dum. & Bibr. Erp. Gén. vii. p. 363; Bouleng., t.c., p. 332.

Tropical and South Africa.

Cape Colony: Cape Division (no history); Burghersdorp (Kannemeyer); Port St. John's (Shortridge); Knysna (Groom); Touw's River, Worcester Division (Le Fèvre, Purell); Beaconsfield (Paynter); Robertson (Melle); Hanover (Schreiner); Beaufort West (Haagner); Ograbis, Little Namaqualand (Strauss).

Natal: Durban (Bowker, Sanderson).

Transvaal: Modderfontein (Haagner); Potchefstroom (Gilchrist).

Rhodesia: Mazoe (Darling); Salisbury (Darling, Marshall, Thomas); Livingstone (Sykes).

Portuguese East Africa: Delagoa Bay (De Coster).

4. BOODON MENTALIS, Günth. Ann. & Mag. N. H. (6) i., 1888, p. 331, pl. xx. fig. A; Bouleng., t.c., p. 335.

Damaraland.

5. LYCOPHIDIUM.

Dum. & Bibr. Mém. Ac. Sc. xxiii., 1853, p. 462; Bouleng. Cat.

Sn. i. p. 336.

Two Species in South Africa.

Ventrals 164-208 *L. capense*.

Ventrals 146-156 *L. semiannulus*.

1. LYCOPHIDIUM CAPENSE.

Lycodon capensis, Smith, S. Afr. Quart. Journ. No. 5, 1831, p. 18.

Lycophidium capense, Bouleng., t.c., p. 339.

Tropical and South Africa.

Cape Colony: Grahamstown (Schönland); Port Elizabeth (Moorhouse); Burghersdorp (Kannemeyer).

Natal: Durban (Bowker).

Transvaal: Johannesburg (Elleman).

Southern Rhodesia: Mazoe (Darling); Salisbury (Marshall, Thomas).

2. *LYCOPHIDIUM SEMIANNULIS*, Peters, Mon. Berl. Ac., 1854, p. 622;
 Bouleng., *t.c.*, p. 339.
 Portuguese East Africa, Zululand.

6. SIMOCEPHALUS.

Günth. Cat. Col. Sn. p. 194 ; Bouleng. Cat. Sn. i. p. 344.

Two Species in South Africa.

Frontal a little shorter than the parietals ; two postoculars ; ventrals
 203-241 *S. capensis*.
 Frontal much shorter than the parietals ; a single postocular ; ven-
 trals 171-185 *S. nyassæ*.

1. *SIMOCEPHALUS CAPENSIS*.

Heterolepis capensis, Smith, Ill., Rept. pl. lv.

Simocephalus capensis, Bouleng., *t.c.*, p. 345.

Central Africa, Portuguese East Africa, Southern Rhodesia,
 Natal.

Natal : Durban (Bowker) ; Southern Rhodesia : Salisbury (Mar-
 shall).

2. *SIMOCEPHALUS NYASSÆ*, Günth. Ann. & Mag. N. H. (6) i., 1888, p. 328 ; Bouleng., *t.c.*, p. 347, pl. xxiii. fig. 2.

East and Central Africa, Portuguese East Africa, Natal, Trans-
 vaal.

Natal : Durban (Bowker).

Portuguese East Africa : Delagoa Bay (Péringuey).

7. PSEUDASPIS.

Cope, Proc. Ac. Philad., 1864, p. 168 ; Bouleng. Cat. Sn. i. p. 373.

1. *PSEUDASPIS CANA*.

Coluber cana, Linn. S. N. i. p. 382.

Pseudaspis cana, Bouleng., *l.c.*

South Africa to Angola and British East Africa.

Cape Colony : Cape Division (Smith, Bishop, Layard, Southey,
 Oakley, Kolbe) ; Tzitzikamma River (Harrison) ; Beaufort
 West (Jackson) ; Graaff-Reinet (Kannemeyer) ; Burghersdorp
 (Kannemeyer) ; Middelburg (Piers) ; Tsomo, Transkei (Water-
 meyer) ; Port Elizabeth (Drege, Moorhouse) ; Port Nolloth
 (Howard) ; Hanover (Schreiner) ; Worcester (Paynter) ; Little
 Namaqualand (Péringuey, Christensen, Scully).

Natal (Sanderson).

Orange River Colony : Smithfield (Kannemeyer).

Transvaal : Johannesburg (Ross) ; Modderfontein (Haagner).

Southern Rhodesia : Mazoe (Darling) ; Salisbury (Thomas).

8. CHLOROPHIS.

Hallow. Proc. Ac. Philad., 1857, p. 52 ; Bouleng. Cat. Sn. ii. p. 91.

Four Species in South Africa.

I. Ventrals without keels.

Two labials entering the eye ; subcaudals 85-107 *C. hoplogaster*.

II. Ventrals with distinct lateral keels.

Two labials entering the eye ; a single anterior temporal ; subcaudals 77-114 *C. neglectus*.

Two labials entering the eye ; usually two superposed anterior temporals ; subcaudals 114-140 *C. natalensis*.

Three labials entering the eye ; subcaudals 94-133 *C. irregularis*.

1. CHLOROPHIS HOPLOGASTER.

Ahatulla hoplogaster, Günth. Ann. & Mag. N. H. (3) xi., 1863, p. 284.

Chlorophis hoplogaster, Bouleng., *t.c.*, p. 93, pl. v. fig. 2.

South Africa, Central and East Africa.

Cape Colony : Wynberg ? (Gardner) ; Port Elizabeth (Cregoe, Moorhouse) ; Port St. Johns (Shortridge) ; Knysna (Baimbridge).

Natal : Durban (Bowker, Sanderson).

Transvaal : Barberton (Rendall).

2. CHLOROPHIS NEGLECTUS.

Philothamnus neglectus, Peters, Mon. Berl. Ac., 1866, p. 890.

Chlorophis neglectus, Bouleng., *t.c.*, p. 94.

East Africa, Southern Rhodesia, British Central Africa.

Southern Rhodesia : Salisbury (Marshall).

3. CHLOROPHIS NATALENSIS.

Dendrophis natalensis, Smith, Ill., Rept. pl. lxiv.

Chlorophis natalensis, Bouleng., *t.c.*, p. 94.

South and Central Africa.

Cape Colony : Mossel Bay (Layard) ; Port St. Johns (Shortridge) ; Port Elizabeth (Moorhouse) ; Kimberley (French) ; Tsomo (Watermeyer).

Natal : Durban (Sanderson).

Transvaal : Lydenburg (Kilgour).

North Western Rhodesia : Kafue River (Drury).

4. CHLOROPHIS IRREGULARIS.

Coluber irregularis, Leach, in Bowdich, Ashantee, p. 494.

Chlorophis irregularis, Bouleng., *t.c.*, p. 96.

Tropical Africa, Southern Rhodesia.

Southern Rhodesia : Mazoe (Darling) ; Salisbury (Marshall, Thomas).

9. PHILOTHAMNUS.

Smith, Ill., Rept. ; Bouleng. Cat. Sn. ii. p. 98.

A single Species in South Africa.

PHILOTHAMNUS SEMIVARIEGATUS, Smith, *op. c.*, pls. lix. and lx. ; Bouleng., *t.c.*, p. 99.

Tropical and South Africa.

Cape Colony : Douglas (Orpen).

Transvaal : Barberton (Rendall).

Rhodesia : Salisbury (Thomas, Darling) ; Livingstone (Stephenson).

Portuguese East Africa : Delagoa Bay (De Coster).

10. PROSYMNA.

Gray, Cat. Sn. p. 80 ; Bouleng. Cat. Sn. ii. p. 246.

Five Species in South Africa.

I. Scales smooth, in 15 rows.

A. Internasal paired ; two superposed anterior temporals .. *P. sundevallii*.

B. Internasal single ; a single anterior temporal.

Width of the frontal not half the width of the head ; ventrals 167 ; subcaudals 50 *P. frontalis*.

Width of the frontal more than half the width of the head ; ventrals 131-153 ; subcaudals 19-34 *P. ambigua*.

Width of the frontal more than half the width of the head ; ventrals 169-185 ; subcaudals 38-49 *P. bergeri*.

II. Scales keeled, in 17 rows ; a single internasal *P. jani*.

1. PROSYMNA SUNDEVALLII.

Temnorhynchus sundevallii, Smith, Ill., Rept., App. p. 17.

Prosymna sundevallii, Bouleng., *t.c.*, p. 247.

Cape Colony, Natal, Orange River Colony, Transvaal.

Cape Colony : Burghersdorp (Kannemeyer) ; Clanwilliam (Slabber) ; Hanover (Schreiner) ; Graaff-Reinet (Paynter) ; Tulbagh (Lightfoot) ; Little Namaqualand.

2. PROSYMNA FRONTALIS.

Temnorhynchus frontalis, Peters, Mon. Berl. Ac., 1867, p. 236, pl. —, fig. 1.

Prosymna frontalis, Bouleng., *t.c.*, p. 248.

German South-West Africa, Angola.

3. PROSYMNA AMBIGUA, Bocage, Journ. Sc. Lisb. iv., 1873, p. 218 ;

Bouleng., *t.c.*, p. 248.

Southern Rhodesia, Zululand, East Africa, Angola.

4. PROSYMNA BERGERI, Lindholm, Jahrb. Nassau. Ver. lv., 1902, p. 57.

German South-West Africa.

5. PROSYMNA JANI, Bianconi, Mem. Acc. Bologna (2) i. 1862, p. 470,

pl. i. ; Bouleng., *t.c.*, p. 249.

Portuguese East Africa, Zululand.

11. HOMALOSOMA.

Wagler, Syst. Amph. p. 190 ; Bouleng. Cat. Sn. ii. p. 273.

Two Species in South Africa.

Ventral 115-144 *H. lutrix*.

Ventrals 97-110 *H. variegatum*.

1. HOMALOSOMA LUTRIX.

Coluber lutrix, Linn. S. N. i. p. 375.

Homalosoma lutrix, Bouleng., *t.c.*, p. 274

Homalosoma shiranum, Bouleng., *t.c.*, p. 276.

South Africa, Central and East Africa.

Cape Colony : Cape Town (Oakley) ; East London (Wood) ;
Caledon (Burgess) ; Port St. Johns (Shortridge) ; Knysna
(Groom) ; Burghersdorp (Kannemeyer) ; Middelburg (Piers) ;
Paarl (Purcell) ; Port Elizabeth (Moorhouse) ; Little Namaqua-
land (Péringuey).

Transvaal : Barberton (Rendall).

2. HOMALOSOMA VARIEGATUM, Peters, Mon. Berl. Ac., 1854, p. 622 ;

Bouleng., *t.c.*, p. 276.

Portuguese East Africa, Zululand.

Delagoa Bay (De Coster).

12. DASYPELTIS.

Wagler, Syst. Amph. p. 178 ; Bouleng. Cat. Sn. ii. p. 353.

A single Species in South Africa.

1. DASYPELTIS SCABRA.

Coluber scaber, Linn. S.N. i. p. 384.

Dasypeltis scabra, Bouleng., *t.c.*, p. 354.

Tropical and South Africa, Egypt.

Cape Colony: Cape Town (Pillans); Swellendam (Cairncross); Worcester (Le Fèvre); Murraysburg (Tyson); East London (Wood); Port St. Johns (Shortridge); Burghersdorp (Kannemeyer); Clanwilliam (Schlechter); Hanover (Schreiner); Graaff-Reinet (Paynter); Port Elizabeth (Drege); Little Namaqualand (Warden).

Basutoland: Morija (Dyke).

Natal: Durban (Bowker).

Transvaal: Johannesburg (Ross); Modderfontein (Haagner).

Southern Rhodesia: Salisbury (Thomas, Darling).

Portuguese E. Africa: Delagoa Bay (De Coster).

B.—OPISTHOGLYPHÆ.

13. PYTHONODIPSAS.

Günth. Ann. & Mag. N. H. (4) i., 1868, p. 425; Bouleng. Cat. Sn. iii. p. 45.

1. PYTHONODIPSAS CARINATA, Günth., *t.c.*, p. 426; Bouleng., *l.c.*
Zambesi, Damaraland.
Damaraland (Nightingale).

14. TARBOPHIS.

Fleischm. Dalm. nov. Serp. Gen. p. 17; Bouleng. Cat. Sn. iii. p. 47.

A single Species in South Africa.

1. TARBOPHIS SEMIANNULATUS.

Telescopus semiannulatus, Smith, Ill., Rept. pl. lxxii.

Tarbophis semiannulatus, Bouleng., *t.c.*, p. 51.

Basutoland, Transvaal, Rhodesia, Portuguese East Africa, Central and East Africa.

Basutoland: Sesheke (Jalle).

Transvaal: Barberton (Rendall).

Portuguese East Africa: Delagoa Bay (De Coster).

15. LEPTODIRA.

Günth. Cat. Col. Sn. p. 165; Bouleng. Cat. Sn. iii. p. 88

A single Species in South Africa.

1. LEPTODIRA HOTAMBÆIA.

Coronella hotambæia, Laurenti, Syn. Rept. p. 85.

Leptodira hotambæia, Bouleng., *t.c.*, p. 89.

Tropical and South Africa.

Cape Colony : Cape Town (de Souza); Port Elizabeth (Moorhouse, Drege); Burghersdorp (Kannemeyer); Clanwilliam (Leipoldt); Worcester (Purcell); East London (Wood); Port St. Johns (Shortridge); Hanover (Schreiner); Kimberley (French); Little Namaqualand (Schlechter).

Basutoland : Morija (Dyke).

Natal : Pine Town (Bowker); Malvern (Bowker).

Transvaal : Barberton (Rendall).

Southern Rhodesia : Salisbury (Marshall).

Portuguese East Africa : Delagoa Bay (De Coster).

16. CHAMÆTORTUS.

Günth. P.Z.S., 1864, p. 310; Bouleng. Cat. Sn. iii. p. 98.

1. CHAMÆTORTUS AULICUS.

Günth., *l.c.*, pl. xxvi. fig. 2; Bouleng., *l.c.*

East and Central Africa, Portuguese East Africa, Transvaal.

Leysdorp, Transvaal (Norton).

17. AMPLORHINUS.

Smith, Ill., Rept.; Bouleng. Cat. Sn. iii. p. 124.

1. AMPLORHINUS MULTIMACULATUS, Smith, *op. c.*, pl. lvii.; Bouleng., *t.c.*, p. 125.

Cape Peninsula.

Cape Peninsula (de Souza, Selater).

18. TRIMERORHINUS.

Smith, Ill., Rept.; Bouleng. Cat. Sn. iii. p. 138.

Two Species in South Africa.

Eye as long as its distance from the nostril *T. rhombeatus.*

Eye shorter than its distance from the nostril *T. triteniatus.*

1. TRIMERORHINUS RHOMBEATUS.

Coluber rhombeatus, Linn. S. N. i. p. 380.

Trimerorhinus rhombeatus, Bouleng., *l.c.*

Psammophis longementalis, Roux, Zool. Jahrb., Syst. xxv., 1907, p. 736, pl. xxvii.

South Africa, Angola.

Cape Colony: Cape Peninsula (Finlay, Schlater); Tulbagh (Kleinschmidt); Touw's River (Le Fèvre); Knysna (Groom); Burghersdorp (Kannemeyer); Robertson (Melle); Worcester (Paynter); Clanwilliam (Schlechter); Middelburg (Piers); George (Leipoldt); Caledon (Burgess); Uitenhage (O'Neil); Port Elizabeth (Moorhouse); Kimberley (French); Tsomo, Transkei (Watermeyer).

Orange River Colony: Harrismith (Ross).

Transvaal: Lydenburg (Kilgour); Krugersdorp (Watson).

2. TRIMERORHINUS TRITÆNIATUS.

Rhagerrhis tritæniata, Günth., Ann. & Mag. N. H. (4) i., 1868, p. 423, pl. xix. fig. H.

Trimerorhinus tritæniatus, Bouleng., t.c., p. 139.

Northern parts of Cape Colony, Transvaal, Tropical Africa.

Cape Colony: Barkly West (Tucker); Kuruman (Moffat).

Southern Rhodesia: Salisbury (Marshall).

19. RHAMPHIOPHIS.

Peters, Mon. Berl. Ac., 1854, p. 624; Bouleng. Cat. Sn. iii. p. 144.

A single Species in South Africa.

1. RHAMPHIOPHIS MULTIMACULATUS.

Coronella multimaculata, Smith, Ill., Rept. pl. lxi.

Rhamphiophis multimaculatus, Bouleng., t.c., p. 148.

Northern parts of Cape Colony, Orange River Colony, German South-West Africa.

Cape Colony: Little Namaqualand (Howard); Kenhardt (Schlechter); Hanover (Schreiner); Burghersdorp (Kannemeyer).

Orange River Colony: Smithfield (Kannemeyer).

20. PSAMMOPHIS.

Boie, Isis, 1827, p. 521; Bouleng. Cat. Sn. iii. p. 152.

Ten Species in South Africa.

1. Scales in 17 rows; ventrals 154-198.

A. Anal entire; two præoculars *P. notostictus*.

B. Anal divided (rarely entire).

1. Præocular extensively in contact with the frontal; forehead concave; two labials entering the eye . . *P. furcatus*.

2. Præocular narrowly in contact with or separated from the frontal.

a. Two præoculars; rostral considerably broader than deep.

8 upper labials, 3 entering the eye		<i>P. transvaaliensis.</i>
9 upper labials, 2 entering the eye		<i>P. trigrammus.</i>
9 upper labials, 3 entering the eye		<i>P. bocagii.</i>

b. A single præocular; rostral as deep as broad or slightly broader than deep; two labials entering the eye.

Frontal, in the middle, narrower than the supraocular; subcaudals 90-116.. .. . *P. sibilans.*

Frontal, in the middle, nearly as broad as the supraocular; subcaudals 64-95 *P. brevirostris.*

II. Scales in 15 rows.

Præocular extensively in contact with the frontal; ventrals 165-177 *P. jallæ.*

Præocular not reaching the frontal; ventrals 136-155 *P. crucifer.*

III. Scales in 13 rows; ventrals 141-155 *P. angolensis.*

1. PSAMMOPHIS NOTOSTICTUS, Peters, Mon. Berl. Ac., 1867, p. 237 ; Bouleng., *t.c.*, p. 156.

South Africa, Angola, Lower Congo.

Cape Colony: Cape Town (Rosser, Lightfoot); Stellenbosch (Francke); Grahamstown; Middelburg (Piers); Victoria West (Piers); Touw's River (Le Fèvre); Beaufort West (Jackson); Graaff-Reinet (Paynter); Burghersdorp (Kannemeyer); Malmesbury Division (Kisel); Ceres (Purcell); Caledon (Burgess); Robertson (Melle); Hanover (Schreiner); Port St. Johns (Shortridge); Little Namaqualand (Schlechter).

Orange River Colony: Smithfield (Kannemeyer).

German South-West Africa: Damaraland (Nightingale).

2. PSAMMOPHIS FURCATUS, Peters, *t.c.*, p. 236, Bouleng., *t.c.*, p. 164. Cape Colony, Transvaal, Southern Rhodesia, German South-West Africa.

Cape Colony: Cape Town (Fisk), Burghersdorp (Kannemeyer) Little Namaqualand (Péringuey, Schlechter), Ograbies (Strauss).

Psammodphis leightoni, Bouleng. P.Z.S., 1902, i. p. 126, pl. xii., I now regard as not separable from *P. furcatus*, the chief difference being that the dark and light markings on the back of the head are transverse in the former, longitudinal in the latter.

3. PSAMMOPHIS TRANSVAALIENSIS, Gough, Ann. Transv. Mus. i., 1908, p. 31, fig.

Transvaal.

4. PSAMMOPHIS TRIGRAMMUS, Günth. Ann. & Mag. N. H. (3) xv., 1865, p. 95, pl. ii. fig. E.; Bouleng. Cat. Sn. iii. p. 159.

Namaqualand.

5. PSAMMOPHIS BOCAGII, Bouleng. Cat. Sn. iii. p. 161, pl. viii.
fig. 1.
Southern Rhodesia, Angola.
Victoria Falls (Sclater).
6. PSAMMOPHIS SIBILANS.
Coluber sibilans, Linn. S. N. i. p. 383.
Psammophis sibilans, Bouleng., *l.c.*
Psammophis thomasi, Gough, Ann. Transv. Mus. i., 1908, p. 30,
fig.
Egypt, Tropical Africa, northern parts of South Africa.
Cape Colony: Little Namaqualand (Strauss).
Transvaal: Leysdorp (Norton); Irene (Taylor).
Rhodesia: Salisbury (Thomas); Mazoe (Alston); Kafue River
(Drury).
7. PSAMMOPHIS BREVIOSTRIS, Peters, Sitzb. Ges. Naturf. Fr., 1881,
p. 89; Bouleng., *t.c.*, p. 166.
South Africa, Angola.
Cape Colony: Cape Division (F. L. Alcock); Tulbagh (Kleinans).
Natal: Durban (Bowker); Pine Town (McKerr).
8. PSAMMOPHIS JALLÆ, Peracca, Boll. Mus. Torin. xi., 1896, No. 255,
fig.
Southern Rhodesia.
Importuni District (Pillans).
9. PSAMMOPHIS CRUCIFER.
Coluber crucifer, Daud. Hist. Rept. vii. p. 189.
Psammophis crucifer, Bouleng., *t.c.*, p. 169.
South Africa.
Cape Colony: Cape Peninsula (Fisk, Taylor, Howes, Southey);
Stellenbosch (Purcell); Knysna (Groom); Port Elizabeth
(Moorhouse, Weale); Burghersdorp (Kannemeyer); Beacons-
field (French); Grahamstown (Jupps); Beaufort West (Rice);
Little Namaqualand (Scully, Schlechter).
Transvaal: Krugersdorp (Watson); Johannesburg (Cregoe);
Lydenburg (Kilgour).
Basutoland: Morija (Sclater).
10. PSAMMOPHIS ANGOLENSIS.
Amphiophis angolensis, Bocage, Jorn. Sc. Lisb. iv., 1872,
p. 82.

Psammophis angolensis, Bouleng., t.c., p. 170.

East and Central Africa, Angola, Orange River Colony.

21. THELOTORNIS.

Smith, Ill., Rept.; Bouleng. Cat. Sn. iii. p. 184.

1. THELOTORNIS KIRTLANDII.

Leptophis kirtlandii, Hallow. Proc. Ac. Philad., 1844, p. 62.

Thelotornis kirtlandii, Bouleng., t.c., p. 185.

Tropical Africa, Southern Rhodesia, Portuguese East Africa,
Zululand, Natal.

Natal: Durban (Bowker).

Portuguese East Africa: Delagoa Bay (De Coster).

Southern Rhodesia: Irome (Blackbeard); Zambesi (Chapman).

22. DISPHOLIDUS.

Duvernoy, Ann. Sc. Nat. xxvi., 1832, p. 150; Bouleng. Cat. Sn. iii.
p. 186.

1. DISPHOLIDUS TYPUS.

Bucephalus typus, Smith, Zool. Journ. iv., 1829, p. 441.

Dispholidus typus, Bouleng., t.c., p. 187.

Tropical and South Africa.

Cape Colony: Cape Peninsula (Layard, Howes, Selater); Knysna
(Groom); Burghersdorp (Kannemeyer); Port St. Johns (Short-
ridge); Port Elizabeth (Moorhouse).

Natal: Durban (Bowker).

Portuguese East Africa: Delagoa Bay (De Coster).

Southern Rhodesia: Salisbury (Darling); Mazoe (Darling);
Shangani District (Pillans).

23. AMBLYODIPSAS.

Peters, Mon. Berl. Ac., 1856, p. 592; Bouleng. Cat. Sn. iii. p. 244.

1. AMBLYODIPSAS MICROPHTHALMA.

Calamaria microphthalma, Bianconi, Spec. Zool. Mosamb. p. 94,
pl. xii. fig. 1.

Amblyodipsas microphthalma, Bouleng., l.c.

Portuguese East Africa, Zululand.

24. CALAMELAPS.

Günth. Ann. & Mag. N. H. (3) xviii., 1866, p. 26; Bouleng. Cat.
Sn. iii. p. 245.

Two Species in South Africa.

Scales in 19 rows; ventrals 161-174 *C. warreni*.
Scales in 17 rows; ventrals 133-134 *C. concolor*

1. CALAMELAPS WARRENI, Bouleng. Ann. Natal Mus. i., 1908,
p. 234, fig.
Zululand, Basutoland.
Sesheke, Basutoland (Jalle).
2. CALAMELAPS CONCOLOR.
Choristodon concolor, Smith, Ill., Rept., App. p. 18.
Calamelaps concolor, Bouleng. Cat. Sn. iii. p. 246.
Calamelaps mironi, Mocquard, Bull. Mus. Paris, 1905, p. 77.
Caffraria, Natal.

25. MACRELAPS.

Bouleng. Cat. Sn. iii. p. 255.

1. MACRELAPS MICROLEPIDOTUS.
Uricchis microlepidotus, Günth. Ann. & Mag. N. H. (3) v., 1860,
p. 168, pl. ix.
Macrelaps microlepidotus, Bouleng., *l.c.*
Natal, Eastern parts of Cape Colony.
Cape Colony: Port St. Johns (Kannemeyer).
Natal: Durban (Bowker).

26. APARALLACTUS.

Smith, Ill., Rept., App. p. 15; Bouleng. Cat. Sn. iii. p. 255.

Two Species in South Africa.

Nasal divided; ventrals 153-180 *A. guentheri*.
Nasal entire; ventrals 138-166 *A. capensis*.

1. APARALLACTUS GUENTHERI, Bouleng. Ann. & Mag. N. H. (6) xvi.,
1895, p. 172, and *t.c.*, p. 259, pl. xi. fig. 2.
East and Central Africa, Angola, Southern Rhodesia.
2. APARALLACTUS CAPENSIS, Smith, *op. c.*, p. 16; Bouleng., *t.c.*,
p. 259.
South and East Africa.
Cape Colony: East London (Londt); Burghersdorp (Kannemeyer).
Transvaal: Leydenburg (Kilgour); Modderfontein (Haagner).

C.—OPISTHOGLYPHÆ.

27. HYDRUS.

Schneid. Hist. Amph. i. p. 233; Bouleng. Cat. Sn. iii. p. 266.

1. HYDRUS PLATURUS.

Anguis platurus, Linn. S. N. i. p. 391.

Hydrus platurus, Bouleng., *t.c.*, p. 267.

Indian Ocean and Tropical Pacific; coast of Cape Colony.

Table Bay and False Bay (Stockdale, Fisk); George; Cape Agulhas (J. van Breda).

28. NAIA.

Laurenti, Syn. Rept. p. 90; Bouleng. Cat Sn. iii. p. 372.

Four Species in South Africa.

I. Suboculars separate the eye from the upper labials.

21 or 23 scales across neck, 19 to 21 across middle of body *N. haie*.

17 scales across neck as well as across body *N. anchietae*.

II. Third or third and fourth upper labials entering the eye.

Sixth upper labial largest and in contact with postoculars; 23 scales

across neck *N. flava*.

Third upper labial deepest, sixth not in contact with postoculars;

23 to 29 scales across neck *N. nigricollis*.

1. NAIA HAIE.

Coluber haie, Linn. S. N. i. p. 387.

Naia haie, Bouleng., *t.c.*, p. 374.

Southern Palestine, North and East Africa, Southern Rhodesia, Zululand, Transvaal.

Portuguese East Africa: Delagoa Bay (De Coster).

Southern Rhodesia: Hunyani River (Thomas, Darling); Salisbury (Darling).

2. NAIA ANCHIETÆ, Bocage, Jorn. Sc. Lisb. vii. 1879, p. 89;

Bouleng., *t.c.*, p. 387.

Angola and German South-West Africa, North-West Rhodesia.

Livingstone, North-West Rhodesia (Sykes).

3. NAIA FLAVA.

Vipera flava, Merrem, Tent. Syst. Amph. p. 154.

Naia flava, Bouleng., *t.c.*, p. 376.

Cape Colony, German South-West Africa.

Cape Town (Fairbridge); Worcester (Le Fèvre); Burghersdorp (Kannemeyer); Douglas (Orpen); Caledon; Riversdale; Knysna; Port Elizabeth (Moorhouse); &c.

4. NAIA NIGRICOLLIS, Reinh. Vid. Selsk. Skrift. x. 1843, p. 269, pl. iii. figs. 5-7; Bouleng. *t.c.*, p. 378.

From Senegambia and Upper Egypt to Angola, German South-West Africa, Little Namaqualand, Southern Rhodesia, the Transvaal, and Natal.

Cape Colony: Little Namaqualand (Schlechter).

Natal: Victoria County (Bowker).

Transvaal: Barberton (Rendall); Modderfontein (Haagner).

Southern Rhodesia: Mazoe (Darling).

German South-West Africa: Damaraland (Hutchinson).

29. SEPEDON.

Merrem, Tent. Syst. Amph. 146; Bouleng. Cat. Sn. iii. p. 388.

1. SEPEDON HEMACHATES.

Coluber hæmachata, Lacep. Hist. Serp. ii. p. 121.

Sepedon hæmachates, Bouleng., *t.c.*, p. 389.

Cape Colony, Natal, Orange River Colony, Transvaal, German South-West Africa.

Cape Colony: Cape Peninsula (Bishop, Howes, Turley, Carr); Tulbagh (Kleinschmidt); Tsomo, Transkei (Watermeyer); Beaufort West (Rice); George (Leipoldt).

Basutoland: Morija (Dyke).

Transvaal: Johannesburg (Fry); Krugersdorp (Watson); Modderfontein (Haagner).

30. ASPIDELAPS.

Smith, Ill., Rept., App.; Bouleng. Cat. Sn. iii. p. 390.

Two Species.

Internasals in contact behind the rostral; third and fourth upper labials entering the eye; scales all smooth; ventrals 146-176 .. *A. lubricus*.
Internasals separated by the rostral; fourth upper labial entering the eye; scales on posterior part of body keeled; ventrals 115-135 .. *A. scutatus*.

1. ASPIDELAPS LUBRICUS.

Natrix lubrica, Laurenti, Syn. Rept. p. 80.

Aspidelaps lubricus, Bouleng., *l.c.*

Cape Colony, German South-West Africa, Rhodesia.

Cape Colony : Cape Town (Layard) ; Durbanville (Schabert) ;
Malmesbury (Gird & Lightfoot) ; Robertson (Hodges) ; Burghers-
dorp (Kannemeyer) ; Clanwilliam (Leipoldt, Smolke, Light-
foot) ; Middelburg (Piers) ; Upington ; Hanover (Schreiner) ;
Port Nolloth (Howard) ; Namaqualand (Péringuey).

Zambesi (Chapman).

2. *ASPIDELAPS SCUTATUS*.

Cyrtophis scutatus, Smith, Ill., Rept., App. p. 22.

Aspidelaps scutatus, Bouleng., t.c., p. 391.

Natal, Portuguese East Africa, Southern Rhodesia.

Portuguese East Africa : Delagoa Bay (De Coster).

31. *ELAPECHIS*.

Bouleng. Cat. Sn. iii. p. 358.

Three Species in South Africa.

Portion of rostral visible from above not half as long as its distance from the frontal, which shield is a little shorter than the parietals ; diameter of eye less than its distance from the nostril in the adult	<i>E. guentheri</i> .
Portion of rostral visible from above at least half as long as its distance from the frontal, which shield is much shorter than the parietals ; diameter of eye less than its distance from the nostril in the adult	<i>E. sundevallii</i> .
Portion of nostral visible from above at least half as long as its distance from the frontal, which shield is much shorter than the parietals ; diameter of eye equal to its distance from the nostril . .	<i>E. decosteri</i> .

1. *ELAPECHIS GUENTHERI*.

Elapsoidea guentheri, Bocage, Jorn. Sc. Lisb. i., 1866, p. 70, pl. i. fig. 3.

Elapechis guentheri, Bouleng., t.c., p. 359.

Tropical Africa, Transvaal.

2. *ELAPECHIS SUNDEVALLII*.

Elaps sundevalli, Smith, Ill., Rept. pl. lxvi.

Elapechis sundevallii, Bouleng., t.c., p. 360.

Natal.

Estcourt.

3. *ELAPECHIS DECOSTERI*.

Elapsoidea decosteri, Bouleng., Ann. & Mag. N. H. (6) ii., 1888, p. 141.

Elapechis decosteri, Bouleng., t.c., p. 360.

2. DENDRASPIIS MAMBA, Gough, Ann. Transv. Mus. i., 1908, p. 37,
fig.
Transvaal.

FAMILY VIPERIDÆ.

Synopsis of the South African Genera.

Eye moderate, with round pupil; head covered with large symmetrical shields; loreal present	<i>Causus.</i>
Eye moderate or small, with vertical pupil; head covered with scales	<i>Bitis.</i>
Eye minute, with round pupil; head small, covered with large symmetrical shields; loreal absent	<i>Atractaspis.</i>

1. CAUSUS.

Wagler, Syst. Amph. p. 172; Bouleng. Cat. Sn. iii. p. 465.

Two Species in South Africa.

Snout obtuse, more or less prominent; ventrals 120-155	<i>C. rhombeatus.</i>
Snout pointed, prominent, more or less turned up at the end; ventrals 113-125	<i>C. defilippii.</i>

1. CAUSUS RHOMBEATUS.

Sepedon rhombeatus, Lichtenst. Verz. Doubl. Mus. Berl. p. 106.

Causus rhombeatus, Bouleng., *t.c.*, p. 467.

Tropical and South Africa.

Cape Colony: Cape Peninsula (Tinley); Knysna (Oakley);
Burghersdorp (Kannemeyer); Tsomo, Transkei (Watermeyer);
George (Leipoldt); Port St. Johns (Shortridge); Kimberley
(French).

Basutoland: Morija (Dyke).

Natal: Durban (Bowker).

Transvaal: Barberton (Rendall); Krugersdorp (Watson).

Southern Rhodesia: Salisbury (Marshall); Mazoe (Darling).

2. CAUSUS DEFILIPPIL.

Heterodon defilippii, Jan, Arch. Zool. Anat. Phys. ii. 1862,
p. 225.

Causus defilippii, Bouleng., *t.c.*, p. 469.

Natal, Transvaal, Southern Rhodesia, Central and East Africa.

Natal: Pinetown (Bowker).

Transvaal: Barberton (Rendall).

Rhodesia: Salisbury (Thomas); Livingstone (Sykes).

2. BITIS.

Gray, Zool. Miscell. p. 69 ; Bouleng. Cat. Sn. iii. p. 492.

Six Species in South Africa.

- I. Nostrils directed upwards ; scales in 31 to 41 rows *B. arietans*.
 II. Nostrils directed upwards and outwards ; scales in 21 to 31 rows.
 A. Supraocular region not raised, without horn-like scales ;
 subcaudals well developed and smooth in both sexes.
 Outer row of scales smooth *B. peringueyi*.
 Outer row of scales keeled *B. atropos*.
 B. Supraocular region raised, without horn-like scales ; sub-
 caudals well developed and smooth in both sexes. *B. inornata*.
 C. Supraocular region usually with horn-like scales ; sub-
 caudals, in females, small and scale-like, more or less
 distinctly keeled.
 Several supraorbital horns *B. cornuta*.
 Supraorbital horn, if present, single *B. caudalis*.

1. BITIS ARIETANS.

Vipera arietans, Merrem, Tent. Syst. Amph. p. 152.

Bitis arietans, Bouleng., *t.c.*, p. 493.

Tropical and South Africa, Arabia.

Cape Colony : Cape Peninsula (Oakley) ; Paarl (Hugo) ; Port
 St. Johns (Shortridge) ; Port Elizabeth (Moorhouse) ; Little
 Namaqualand (Péringuey).

Basutoland : Morija (Dyke).

Natal : Victoria County (Bowker).

Southern Rhodesia : Mazoe (Darling) ; Hunyani River (Thomas) ;
 Salisbury (Thomas).

German South-West Africa : Damaraland (Fairbridge).

2. BITIS PERINGUEYI.

Vipera peringueyi, Bouleng. Ann. & Mag. N. H. (2) ii., 1888, p. 141.

Bitis peringueyi, Bouleng., *t.c.*, p. 495.

German South-West Africa, Kalahari, Angola.

Walfisch Bay territory (Nightingale), *type*.

3. BITIS ATROPOS.

Coluber atropos, Linn. S. N. i. p. 375.

Bitis atropos, Bouleng., *t.c.*, p. 495.

Cape Colony, Transvaal.

Cape Colony : Cape Peninsula (Fairbridge, Layard, Lightfoot) ;
 Knysna (Oakley) ; East London (Wood) ; Port Elizabeth
 (Drege, Moorhouse).

Transvaal : Lydenburg (Kilgour).

4. BITIS INORNATA.

Echidna inornata, Smith, Ill., Rept. pl. iv.

Bitis inornata, Bouleng., t.c., 496.

Cape Colony.

5. BITIS CORNUTA.

Vipera cornuta, Daud. Hist. Rept. vi. p. 188.

Bitis cornuta, Bouleng., t.c., p. 497.

Cape Colony, German South-West Africa.

Cape Colony: Cape Peninsula (Oakley, Ogilvie); Calvinia, Clanwilliam (Schlechter); Worcester (Le Fèvre, Paynter); Serowe, Bechuanaland (Schönland); Little Namaqualand (Turle); Tulbagh (Kleinschmidt).

6. BITIS CAUDALIS.

Vipera caudalis, Smith, Ill., Rept. pl. vii.

Bitis caudalis, Bouleng., t.c., p. 498.

Angola to the north part of Cape Colony and Southern Rhodesia.

Cape Colony: Little Namaqualand (Hirsch, Scully, Thomas, Turle); Victoria West (Piers); Serowe, Bechuanaland (Blackbeard).

Southern Rhodesia: Insiza (French).

3. ATRACTASPIS.

Smith, Ill., Rept.; Bouleng. Cat. Sn. iii. p. 510.

Two Species in South Africa.

Ventrals 221-260	<i>A. bibronii</i> .
Ventral 199	<i>A. duerdeni</i> .

1. ATRACTASPIS BIBRONII, Smith, op. c. pl. lxxi.; Bouleng., t.c., p. 515.

Cape Colony, Natal, Zululand, Transvaal, Portuguese East Africa, German South-West Africa, Angola.

Natal: Durban (Bowker).

Transvaal: Barberton (Kolbe).

Portuguese East Africa: Delagoa Bay (De Coster).

2. ATRACTASPIS DUERDENI, Gough, Albany Mus. Rec., ii., 1907, p. 178, fig.

North-East Kalahari.

DESCRIPTION OF NEW SPECIES.

GLAUCONIA GRACILIOR.

Snout rounded; supraocular present, not much larger than the frontal, a little broader than long; rostral about one-third the width of the head, hardly twice the width of the nasal, not extending posteriorly beyond the level of the eyes, in contact behind with the frontal and the supraoculars; nasal completely divided into two; ocular bordering the lip, between two labials, the anterior of which is very small. Body very slender, its diameter 90 to 110 times in the total length. 14 scales round the body. Length of tail 10 to 15 times in total length. Uniform blackish brown. Total length, 230 mm.

Numerous specimens from various localities in Cape Colony (Van Rynsdorp, Robertson, Clanwilliam, Matjesfontein).

PART III.—BATRACHIA.

ECAUDATA.

Five Families in South Africa.

I. Tongue present; eustachian tubes separated; movable eyelids (*Phanero glossa*).

A. Pectoral arch without arched epicoracoid cartilage (*Firmisternia*).

Upper jaw toothed; tongue extensively free behind *Ranidæ*.

No teeth; tongue extensively free behind *Engystomatidæ*.

B. Præcoracoid connected with the coracoid on the median line by an arched epicoracoid cartilage overlapping its fellow (*Arcifera*).

Upper jaw toothed; tongue disk-shaped and slightly free behind *Cystignathidæ*.

No teeth; tongue extensively free behind *Bufo nidae*.

II. Tongue absent; eustachian tubes united in a single opening; no eyelids (*Aglossa* *Pipidæ*).

FAMILY RANIDÆ.

Nine Genera in South Africa.

I. Pupil horizontal.

A. Tips of fingers and toes not dilated into large disks.

1. Vomerine teeth present; tongue without a free papilla in the middle.

Outer metatarsals separated by web; inner metatarsal tubercle

small, soft *Rana*.

Outer metatarsals bound together; inner metatarsal tubercle

large, hard, compressed *Pyxicephalus*.

2. Vomerine teeth absent.

Outer metatarsals separated by web; toes webbed; tongue deeply

notched behind *Phrynobatrachus*.

Outer metatarsals bound together; toes free or nearly so;

tongue feebly notched *Arthroleptis*.

B. Tips of fingers and toes dilated into large disks.

Outer metatarsals separated by web; vomerine teeth present;

two inner fingers opposable to two outer *Chiromantis*.

Outer metatarsals bound together; vomerine teeth absent . . . *Rappia*.

II. Pupil vertical; outer metatarsals bound together.

A. Tips of fingers and toes dilated into large disks; toes webbed.

Vomerine teeth absent *Megalixalus*.

Vomerine teeth present *Hylambates*.

B. Tips of fingers and toes not dilated; toes free or with a rudiment of web

Cassina.

1. RANA.

Linn. S.N. i. p. 354; Bouleng. Cat. Batr. p. 6.

Eight Species in South Africa.

I. Vomerine teeth in two oblique groups or short transverse series between or just behind the level of the choanæ.

- A. Eyes supero-lateral, interorbital space much narrower than the upper eyelid; toes at least two-thirds webbed; hind limbs with more or less regular dark transverse spots or cross-bars; males with internal vocal sacs.

Tibio-tarsal articulation not reaching, or barely reaching, the

tip of the snout, the leg (tibia) not more than half length of

head and body *R. fuscigula*.

Tibio-tarsal articulation reaching beyond tip of snout, the leg

more than half length of head and body *R. delalandii*.

- B. Eyes lateral, interorbital space nearly as broad as the upper eyelid; toes about half, or barely two-thirds webbed; skin perfectly smooth on the back; leg not more than half length of head and body; hind limbs without dark transverse spots or cross-bars; males with external vocal sacs.

Vomerine teeth between the choanæ; tibio-tarsal articulation not reaching beyond the eye *R. galamensis*.

Vomerine teeth behind the level of the choanæ; tibio-tarsal articulation reaching between the eye and the tip of the snout *R. darlingi*.

II. Vomerine teeth in two short, straight or oblique series touching the inner front edge of the choanæ; males with external vocal sacs.

Toes about half-webbed; leg one-half to two-thirds the length of head and body *R. mascareniensis*.

Toes nearly entirely webbed (to the tips of the third and fourth); leg at least two-thirds the length of head and body *R. oxyrhynchus*.

III. Vomerine teeth in two long, straight, or slightly oblique series on a level with the front border of the choanæ; web between the toes very short or rudimentary; males with internal vocal sacs.

Foot not two-thirds the length of head and body *R. grayi*.

Foot more than two-thirds the length of head and body *R. fuscata*.

1. *RANA FUSCIGULA*, Dum. & Bibr. Erp. Gén. viii. p. 386; Bouleng., *op. cit.*, p. 50.

Rana queketti, Bouleng. P.Z.S., 1894, p. 643, pl. xxxix. fig. 1.

South Africa, British Central Africa, West Africa.

Cape Colony: Cape Peninsula (Oakley, Lightfoot, Purcell); Cape Town (Trimen, Oakley, Werth); Stellenbosch (Purcell); Caledon (Purcell); Paarl (Sclater); Tulbach (Purcell); Clanwilliam (Leipoldt); Calvinia (French); Worcester Division (Paynter, Purcell); Ceres (Purcell); Laingsberg Division (Purcell); Robertson (Keit); Port Elizabeth (Moorhouse).

Orange River Colony: Smithfield (Kannemeyer).

2. *RANA DELALANDII*, Dum. & Bibr., *t.c.*, p. 388.

Rana angolensis (Bocage), Bouleng., *op. cit.*, p. 50.

South Africa, Angola, British Central Africa.

Cape Colony: Port Elizabeth (Moorhouse); Calvinia (French) Bedford Division (Sclater).

Natal (no history).

Orange River Colony: Smithfield (Kannemeyer).

Transvaal: Johannesburg (Elleman, Ross).

Southern Rhodesia: Salisbury (ff. Darling).

3. *RANA GALAMENSIS*, Dum. & Bibr., *t.c.*, p. 367; Bouleng., *op. cit.*, p. 61.

Tropical Africa to Beira.

4. *RANA DARLINGI*, Bouleng. P.Z.S., 1902, ii. p. 15, pl. iii. fig. 1.
Mashonaland.

5. RANA MASCARENIENSIS, Dum. & Bibr., *t.c.*, p. 350; Bouleng. Cat., p. 52.
Egypt and Tropical Africa to Southern Rhodesia and Zululand.
Southern Rhodesia: Salisbury (Marshall).
6. RANA OXYRHYNCHUS, Smith, Ill., Rept. pl. lxxvii. fig. 2; Bouleng., *op. cit.*, p. 51.
Tropical and South Africa.
Southern Rhodesia: Salisbury (Marshall).
North-West Rhodesia: Livingstone (Drury).
7. RANA GRAYI, Smith, Ill., Rept. pl. lxxvii. fig. 2; Bouleng., *op. cit.*, p. 53.
Cape Colony, Natal, Zululand.
Cape Colony: Cape Peninsula (Oakley, Selater, Purcell, de Souza); Caledon Division (Purcell, Lightfoot); Paarl Division (Selater); Ceres (Purcell); Clanwilliam Division (Leipoldt, Lightfoot); Port Elizabeth (Drege, Moorhouse); Swellendam (Purcell); Port St. Johns (Shortridge); Touw's River, Worcester Division (Paynter); Little Namaqualand (Péringuey).
Natal: Durban (Bowker); Umvoti (Fry).
8. RANA FASCIATA.
Strongylopus fasciatus, Tschudi, Class. Batr., p. 79.
Rana fasciata, Bouleng., *op. cit.*, p. 54.
Cape Colony, Natal, Zululand, British Central Africa.
Cape Colony: Cape Peninsula (Layard, Butler, Oakley, Purcell); Caledon Division (Purcell); Clanwilliam (Lightfoot); King William's Town (Selater); George (Leipoldt).

2. PYXICEPHALUS.

Tschudi, Class. Batr. p. 83.

Four Species in South Africa.

I. Male with internal vocal sacs.

Leg (tibia) about $\frac{1}{3}$ length of head and body; tarso-metatarsal articulation reaching tympanum or eye; back usually with elongate warts or glandular longitudinal folds; head large and rough in adult	<i>P. adspersus.</i>
Leg about $\frac{2}{3}$ length of head and body; tarso-metatarsal articulation reaching eye or a little beyond; back with rounded warts	 <i>P. delalandii.</i>
Leg about $\frac{1}{2}$ length of head and body; tarso-metatarsal articulation nearly reaching end of snout; back smooth	 <i>P. natalensis.</i>

II. Male with external vocal sacs.

Leg about $\frac{2}{3}$ length of head and body; tarso-metatarsal articulation reaching eye; back with flat warts and a very indistinct dorso-lateral fold *P. ruddi*.

1. PYXICEPHALUS ADSPERSUS, Tschudi, *op. cit.*, p. 84.

Rana adpersa, Bouleng. Cat. p. 33.

Tropical Africa to German South-West Africa, Southern Rhodesia, Transvaal, Orange River Colony, Eastern parts of Cape Colony. Cape Colony: Albany Division (Schönland); Port St. Johns (Shortridge).

Orange River Colony: Smithfield (Kannemeyer); Vredefort Road (Barrett-Hamilton).

Southern Rhodesia: Mazoe (ff. Darling).

2. PYXICEPHALUS DELALANDII, Tschudi, *l.c.*

Rana delalandii, Bouleng., *t.c.*, p. 31.

Tropical and South Africa.

Cape Colony: Cape Division (Butler, de Souza, Selater); Bedford Division (Stephenson); Burghersdorp (Kannemeyer); Hanover (Shortridge); Port Elizabeth (Drege); Clanwilliam (Leipoldt); Little Namaqualand (Péringuey).

Orange River Colony: Smithfield (Kannemeyer).

Southern Rhodesia: Matoppo Hills (Pillans).

3. PYXICEPHALUS NATALENSIS, Smith, Ill., Rept. App. p. 23.

Rana natalensis, Bouleng., *t.c.*, p. 30.

Natal, Zululand, Transvaal.

Durban (Bowker).

4. PYXICEPHALUS RUDDI.

Rana ruddi, Bouleng. P.Z.S., 1907, p. 480, pl. xxii. fig. 1.

Portuguese East Africa (Beira).

3. PHRYNOBATRACHUS.

Günth. P.Z.S., 1862, p. 190; Bouleng. Cat. p. 111.

Three Species in South Africa.

Tympanum very indistinct or hidden; tarso-metatarsal articulation reaching tip of snout or a little beyond	<i>P. natalensis</i> .
Tympanum distinct; tarso-metatarsal articulation reaching far beyond tip of snout.	<i>P. ranoides</i> .
Tympanum distinct; tarso-metatarsal articulation reaching the eye	<i>P. capensis</i> .

1. PHRYNOBATRACHUS NATALENSIS. .
Stenorhynchus natalensis, Smith, Ill., Rept. App. p. 23.
Phrynobatrachus natalensis, Bouleng., *op. cit.*, p. 112.
 Natal, Zululand, Transvaal, Orange River Colony, Southern Rhodesia, Angola, Central and East Africa.
 Southern Rhodesia : Mazoe, Mashonaland (ff. Darling).
 British Central Africa : Fwanbo.
2. PHRYNOBATRACHUS RANOIDES, Bouleng. P.Z.S., 1894, p. 644,
 pl. xxxix. fig. 2.
 Natal.
3. PHRYNOBATRACHUS CAPENSIS, sp. n.
 Cape Colony : Cape Division (Purcell).

4. ARTHROLEPTIS.

Smith, Ill., Rept. App. p. 24 ; Bouleng. Cat. p. 116.

Three Species in South Africa.

- I. First finger as long as second.
 Inner metatarsal tubercle much shorter than inner toe *A. wahlbergii*.
 Inner metatarsal tubercle as long as inner toe *A. whytii*.
 - II. First finger shorter than second *A. lightfooti*.
1. ARTHROLEPTIS WAHLBERGII, Smith, *l.c.* ; Bouleng., *op. c.*, p. 117.
 Cape Colony, Natal, Zululand.
 Cape Colony : Port St. Johns (Shortridge).
 2. ARTHROLEPTIS WHYTII, Bouleng. P.Z.S., 1897, p. 802, pl. xlvi.
 fig. 3.
 Portuguese East Africa, British Central Africa.
 3. ARTHROLEPTIS LIGHTFOOTI, sp. n.
 Cape Colony : Newlands, Cape Division (Lightfoot).

5. CHIROMANTIS.

Peters, Arch. f. Naturg., 1855, p. 56 ; Bouleng. Cat. p. 92.

A Single Species in South Africa.

1. CHIROMANTIS XERAMPELINA, Peters, *l.c.*, p. 56 ; Bouleng., *op. c.*,
 p. 93.
 East Africa, Rhodesia, Transvaal.

Transvaal : Lydenburg (Fry).

Southern Rhodesia : Palapye (Selater).

North-Western Rhodesia : Livingstone (Stephenson).

6. RAPPIA.

Günth. Zool. Rec. i., 1865, p. 130 ; Bouleng. Cat. p. 119.

Seven Species in South Africa.

- I. Snout scarcely projecting beyond mouth.
 - A. Snout obtusely pointed ; tibio-tarsal articulation reaching between eye and tip of snout ; back smooth *R. horstockii*.
 - B. Snout rounded ; tibio-tarsal articulation not reaching beyond eye.
 1. Back smooth.

A strong fold across chest	<i>R. marmorata</i> .
No strong fold across chest	<i>R. argus</i> .
 2. Back more or less warty.

Fingers one-third webbed	<i>R. undulata</i> .
Fingers not one-third webbed	<i>R. cinctiventris</i> .
 - C. Snout rounded ; tibio-tarsal articulation reaching tip of snout ; tongue with two projecting papillæ in front *R. tuberilinguis*.
- II. Snout very pointed, strongly projecting beyond mouth *R. sugillata*.

1. RAPPIA HORSTOCKII.

Hyla horstockii, Schleg. Abbild. p. 24.

Rappia horstockii, Bouleng., *op. c.*, p. 120.

Cape Colony.

Cape Peninsula (French) ; Cape Flats (Fry, de Souza, Treleaver, Duncan) ; Knysna (Goldburg).

2. RAPPIA MARMORATA.

Hyperolius marmoratus, Rapp, Arch. f. Naturg., 1842, p. 289, pl. vi.

Rappia marmorata, Bouleng., *t.c.*, p. 121.

Tropical and South Africa.

Cape Colony : Cape Peninsula (de Souza) ; Port St. Johns (Short-ridge) ; Kentani (Kolbe, Pegler).

Southern Rhodesia : Salisbury (Marshall).

Portuguese East Africa : Delagoa Bay (De Coster).

German South-West Africa : Otjimborra (Eriksson).

3. RAPPIA ARGUS.

Hyperolius argus, Peters, Arch. f. Naturg., 1855, p. 57.

Rappia argus, Bouleng., *op. c.*, p. 132.
Central and East Africa, Zululand.

4. *RAPPIA UNDULATA*, Bouleng. Ann. Mus. Congo, ii. 1902, p. 4, pl. ii.
fig. 2.

East and Central Africa, Natal, Cape Colony.
Cape Colony : Cape Division ; Port Elizabeth (Bairston).

5. *RAPPIA CINCTIVENTRIS*.

Hyperolius cinctiventris, Cope, Proc. Ac. Philad., 1862, p. 342.

Rappia cinctiventris, Bouleng. Cat. p. 126.

Tropical and South Africa.

Cape Colony : East London (Wood).

Southern Rhodesia (J. R. Ward).

6. *RAPPIA TUBERILINGUIS*.

Hyperolius tuberilinguis, Smith, Ill., Rept. App. p. 26.

Rappia tuberilinguis, Bouleng., *op. c.*, p. 125.

Caffraria.

7. *RAPPIA SUGILLATA*.

Hyperolius sugillatus, Cope, Proc. Ac. Philad., 1862, p. 342.

Natal, German South-West Africa, Angola.

German South-West Africa : Otjimbora, Damaraland (Eriksson).

7. MEGALIXALUS.

Günth. P.Z.S., 1868, p. 485 ; Bouleng. Cat. p. 128.

Two Species in South Africa.

Fingers one-third webbed		<i>M. fornasinii</i> .
Fingers with a rudiment of web; vertex and snout with spinose		
horny tubercles		<i>M. spinifrons</i> .

1. *MEGALIXALUS FORNASINII*.

Eucnemis fornasinii, Bianc. Spec. Zool. Mossamb., Rept. pl. v.

fig. 1.

Megalixalus fornasinii, Bouleng., *op. c.*, p. 130.

Tropical Africa, Portuguese East Africa.

2. *MEGALIXALUS SPINIFRONS*.

Hyperolius spinifrons, Cope, Proc. Ac. Philad., 1862, p. 372.

Megalixalus spinifrons, Bouleng., *op. c.*, p. 130.

Cape Colony, Natal.

Cape Colony : Cape Division (de Souza).

8. HYLAMBATES.

A. Dum. Ann. Sc. Nat. (3) xix., 1853, p. 162; Bouleng Cat. p. 132.

A Single Species in South Africa.

1. HYLAMBATES NATALENSIS.

Polypedates natalensis, Smith, Ill., Rept. App. p. 25.

Hylambates natalensis, Bouleng., *op. c.*, p. 135.

Cape Colony, Natal.

Cape Colony : Port St. Johns (Shortridge, Weisbecker).

Natal: Durban (Bowker); Pinetown (Cregoe); Umvoti (Fry).

9. CASSINA.

Girard, Proc. Ac. Philad., 1853, p. 421; Bouleng. Cat. p. 131.

Two Species, which may have to be united.

Toes quite free *C. senegalensis*.

Toes with a distinct rudiment of web *C. wealii*.

1. CASSINA SENEGALENSIS.

Cystignathus senegalensis, Dum. & Bibr. Erp. Gén. viii. p. 418.

Cassina senegalensis, Bouleng., *l.c.*

Tropical Africa, Cape Colony, Natal, Southern Rhodesia.

2. CASSINA WEALII, Bouleng., *l.c.*, pl. xi., fig. 7.

Cape Colony, Natal.

Cape Colony : Cape Division (de Souza).

FAMILY ENGYSTOMATIDÆ.

Four Genera in South Africa.

Tips of fingers and toes dilated *Phrynomantis*.

Tips of fingers and toes not dilated; limbs moderately developed,
not adapted for burrowing; mouth moderately large *Cacosternum*.

Tips of fingers and toes not dilated; limbs very short, the hind
pair adapted for burrowing; mouth very small, snout very short *Brericeps*.

Tips of fingers and toes not dilated; limbs very short, the front
pair adapted for burrowing; mouth very small, snout rather long
and pointed *Hemisus*.

1. PHRYNOMANTIS.

Peters, Mon. Berl. Ac. 1867, p. 35; Bouleng. Cat. p. 172.

Two Species in South Africa.

Inner metatarsal tubercle very small; black above, with orange or red markings	<i>P. bifasciata.</i>
Inner metatarsal tubercle larger; grey above, with black markings	<i>P. annectens.</i>

1. PHRYNOMANTIS BIFASCIATA.

Brachymerus bifasciatus, Smith, Ill., Rept. pl. lxiii.

Phrynomantis bifasciata, Bouleng., l.c.

East and Central Africa and Angola to the northern parts of Cape Colony and Natal.

Cape Colony: Kimberley (Gain).

Bechuanaland: Palapye (Blackbeard).

Nyassaland: Shiré Valley.

2. PHRYNOMANTIS ANNECTENS, Werner, Jen. Zeitschr. xvi. 1910, p. 294.

Cape Colony, Aar River.

2. CACOSTERNUM.

Bouleng. Ann. & Mag. N. H. (5) xx., 1887, p. 51.

1. CACOSTERNUM BOETTGERI.

Arthroleptis boettgeri, Bouleng. Cat. p. 118, pl. xi. fig. 6.

Cacosternum nanum, Bouleng. Ann. & Mag. N. H. (5) xx., 1887, p. 51.

Cacosternum namaquense, Werner, Jen. Zeitschr. xvi., 1910, p. 294, fig.

South and East Africa.

Cape Colony: Cape Town (Lightfoot); Table Mountain (Sclater); Wynberg (Purcell); Caledon (Purcell); Beaufort West (Purcell); Montague (Purcell); Calvinia (Leipoldt); Graaff-Reinet (Paynter); Little Namaqualand (Turle).

Orange River Colony: Smithfield (Kannemeyer); Vredefort Road (Barrett-Hamilton).

North-Western Rhodesia: Livingstone (Drury).

3. BREVICEPS.

Merrem, Tent. p. 178: Bouleng. Cat. p. 176.

Synopsis of the Species.

- I. Fourth finger nearly as long as or a little shorter than second; tubercles under fingers and toes quite distinct.
 Diameter of eye 10 to 15 times in distance from end of snout to vent.. *B. gibbosus*.
 Diameter of eye 8 times in distance from end of snout to vent .. *B. adspersus*.
- II. Fourth finger much shorter than second.
 Diameter of eye 8 to 10 times in distance from end of snout to vent; tubercles under fingers and toes feebly prominent or quite distinct *B. mossambicus*.
 Diameter of eye $6\frac{1}{2}$ to 8 times in distance from end of snout to vent; tubercles very small under the fingers, wholly absent under the toes *B. macrops*.
1. BREVICEPS GIBBOSUS.
Rana gibbosa, Linn. S. N. i. p. 355.
Breviceps gibbosus, Bouleng., *op. cit.*, p. 176.
Breviceps verrucosus (Rapp), Bouleng., *op. c.*, p. 177.
Breviceps pentheri, Werner, Zool. Anz. 1899, p. 116.
 South Africa, British Central Africa.
 Cape Colony: Cape Peninsula (Purcell, Selater, Oakley, Fisk, Spratt); Robertson Division (Keit); Swellendam Division (Barry); Bathurst Division (Becker); George (Wilman); Port St. Johns (Shortridge).
 Natal: Durban (Bowker).
 Transvaal: Barberton (Cregoe).
2. BREVICEPS ADSPERSUS, Peters, Reise Mossamb. iii. p. 177.
 Cape Colony, Transvaal, German South-West Africa.
 Cape Colony: Port Nolloth (Scully).
3. BREVICEPS MOSSAMBIUS, Peters, Arch. f. Naturg., 1855, p. 58;
 Bouleng., *op. c.*, p. 177.
 Natal, Zululand, Transvaal, Portuguese East Africa, Rhodesia, German South-West Africa, Angola, British Central Africa.
 Natal: Durban (Bowker).
 Transvaal: Barberton (Rendall); Pietersburg (Daneel); Johannesburg (Fry).
 Southern Rhodesia: Salisbury (ff. Darling); Mazoe (ff. Darling).
 Portuguese East Africa: Delagoa Bay (De Coster).
4. BREVICEPS MACROPS, Bouleng. Ann. & Mag. N. H. (7) xx., 1907, p. 46, pl. ii.

Cape Colony.

Cape Colony : Little Namaqualand (Kolbe), *types*.

4. HEMISUS.

Günth. Cat. p. 47 ; Bouleng. Cat. p. 178.

Two Species.

Toes free, without subarticular tubercles; inner metatarsal tubercle small *H. guttatum*.
Toes with a rudiment of web, with more or less distinct subarticular tubercles; inner metatarsal tubercle large, compressed *H. marmoratum*.

1. HEMISUS GUTTATUM.

Engystoma guttatum, Rapp, Arch. f. Naturg., 1842, p. 290, pl. vi. figs. 3 and 4.

Hemismus guttatum, Bouleng., *l.c.*

Eastern parts of Cape Colony, Natal, Zululand.

Natal coast (Quekett).

2. HEMISUS MARMORATUM.

Engystoma marmoratum, Peters, Arch. f. Naturg., 1855, p. 58.

Hemismus sudanense, Bouleng., *l.c.*

Tropical Africa southwards to Angola, Mashonaland, and Beira.

FAMILY CYSTIGNATHIDÆ.

*A Single Genus in Africa.**

1. HELEOPHRYNE.

W. Selater, Ann. S. Afr. Mus. i., 1895, p. 110; Hewitt, Ann. Transv. Mus., 1909, p. 45.

Two Species.

Toes entirely webbed *H. purcelli*.
Toes half-webbed *H. regis*.

1. HELEOPHRYNE PURCELLI, W. Selater, *t.c.*, p. 111, pl. —, fig. 3.

Cape Colony.

Stellenbosch Division (Purcell), *type*.

2. HELEOPHRYNE REGIS, Hewitt, *l.c.*

Cape Colony (Knysna).

* An examination of the pectoral arch of the type of *Heleophryne* enables me to confirm Mr. J. Hewitt's very interesting discovery that this genus belongs to the Cystignathidæ.

FAMILY BUFONIDÆ.

A Single Genus in South Africa.

1. BUFO.

Laurenti, Syn. Rept. p. 25; Bouleng. Cat. p. 281.

Seven Species in South Africa.

I. Tympanum distinct.*

A. Parotoid glands distinct.

First finger much longer than second; tympanum at least $\frac{2}{3}$ diameter of eye in adult; tarso-metatarsal articulation reaching tympanum or beyond *B. regularis.*

Fingers blunt, first not extending, or extending but little beyond second; tympanum $\frac{1}{2}$ to $\frac{3}{4}$ diameter of eye; tarso-metatarsal articulation not reaching beyond tympanum *B. granti.*

Fingers rather pointed, first not extending beyond second; tympanum $\frac{1}{3}$ to $\frac{1}{2}$ diameter of eye; tarso-metatarsal articulation not extending beyond centre of eye; greater part of belly smooth *B. angusticeps.*

B. No distinct parotoid glands; tympanum large and close to the eye.

A glandular lateral fold from behind the eye *B. carens.*

No glandular lateral fold *B. vertebralis.*

II. Tympanum absent.

Snout rounded; parotoid glands rather small, narrow *B. taitanus.*

Snout pointed; parotoid glands large, extending down the sides. *B. anotis.*

1. BUFO REGULARIS, Reuss, Mus. Senck. i. p. 60; Bouleng. Cat. p. 298.

Egypt and Tropical and South Africa.

Cape Colony: Cape Division (Oakley, Duncan); Port Elizabeth (Cregoe); Ceres (Purcell); Tulbagh (Purcell); Paarl (Purcell); George (Leipoldt); Caledon (Purcell); Swellendam (Purcell); Burghersdorp (Kannemeyer); &c.

Orange River Colony: Smithfield (Kannemeyer).

Transvaal: Barberton (Rendall); Johannesburg (Cregoe, Ross); Krugersdorp (Watson).

Southern Rhodesia: Salisbury (Marshall, ff. Darling, Thomas).

2. BUFO GRANTI, Bouleng. Ann. & Mag. N. H. (7) xii., 1903, p. 215, pl. xvi.

Cape Colony, Natal, Orange River Colony.

Cape Colony: Hanover (Schreiner, Shortridge); Graaff-Reinet (Paynter); Beaufort West (Purcell); Lingsburg, Worcester Division (Purcell); Little Namaqualand, (Péringuey, Turle).

* Except in very young specimens.

Natal : Mt. aux Souces (Bolos).

Orange River Colony : Smithfield (Kannemeyer).

3. *BUFO ANGUSTICEPS*, Smith, Ill., Rept., pl. lxi. fig. 1 ; Bouleng. Cat. p. 300.

Cape Colony, Natal.

Cape Colony : Cape Peninsula (Lightfoot, de Souza, Purcell, Southey, French) ; Caledon (Purcell) ; Worcester Division (Purcell, Paynter).

4. *BUFO CARENS*, Smith, *op. cit.*, pl. lxxviii. fig. 1 ; Bouleng., *op. c.*, p. 301.

Natal, Transvaal, Rhodesia, Portuguese East Africa.

Transvaal : Barberton (Rendall).

Southern Rhodesia : Salisbury (Thomas) ; Matoppos Hills (Pillans).

5. *BUFO VERTEBRALIS*, Smith, *op. cit.*, pl. lxxviii. fig. 2.

Cape Colony, Orange River Colony.

Cape Colony : Cape Kentany (Pegler).

Orange River Colony : Smithfield (Kannemeyer) ; Vredefort Road (Hamilton).

6. *BUFO TAITANUS*, Peters, Mon. Berl. Ac., 1878, p. 208, pl. ii. fig. 9.
East and Central Africa : Portuguese East Africa (Beira).

7. *BUFO ANOTIS*, Bouleng. Ann. & Mag. N. H. (7) xx., 1907, p. 48, pl. iii.

Chirinda Forest, Mashonaland.

FAMILY PIPIDÆ.

A Single Genus in South Africa.

1. XENOPUS.

Wagler, Isis, 1827, p. 726 ; Bouleng. Cat. p. 456.

1. *XENOPUS LEVIS*.

Pipa levis, Daud. Hist. Rain. Gren. Crap. p. 85, pl. xxx. fig. 1.

Xenopus levis, Bouleng., *l c.*

South Africa, Angola, East Africa.

Cape Colony: Cape Division (R. Trimen); Robertson (Keit); Worcester (Purcell); Clanwilliam (Leipoldt); Prince Albert (Purcell); Burghersdorp (Kannemeyer); Calvinia (Leipoldt); Bedford (Selater); Port St. Johns (Shortridge).

DESCRIPTIONS OF NEW SPECIES.

PHRYNOBATRACHUS CAPENSIS.

Tongue without median papilla. Head as long as broad; snout rounded, hardly as long as the orbit; no canthus rostralis; interorbital space broader than the upper eyelid; tympanum hidden. Fingers and toes obtuse, the tips not dilated; first finger slightly shorter than second; toes one-third webbed, the web deeply notched but continued as a fringe to the last or penultimate phalanx; subarticular tubercles small, feebly prominent; a very small inner metatarsal tubercle; no tarsal tubercle. Tarso-metatarsal articulation reaching the eye; tibia a little shorter than the foot, nearly $\frac{2}{3}$ length of head and body. Skin smooth. Dark brown above, speckled with darker; a light band along each side; a dark bar between the eyes, divided by a narrow light vertebral line; lower parts brown, belly spotted with white.

From snout to vent 15 mm.

A single specimen from the Cape Flats (Coll. Dr. Purcell).

ARTHROLEPTIS LIGHTFOOTI.

Tongue without median papilla. Head as long as broad; snout rounded, as long as the orbit; canthus rostralis feeble; interorbital space broader than the upper eyelid; tympanum distinct, barely half the diameter of the eye. Fingers and toes with swollen tips; first finger shorter than second; toes with an almost imperceptible rudiment of web; subarticular tubercles small, feebly prominent; a very small inner metatarsal tubercle; no tarsal tubercle. Tarso-metatarsal articulation reaching the eye; tibia slightly shorter than the foot, $\frac{2}{3}$ length of head and body. Greyish brown above, snout and flanks lighter; a blackish brown streak from the nostril to above the root of the arm, passing through the eye and broader on the temple; dark brown spots on the upper lip; lower parts white, sides of belly and hind limbs marbled with dark brown.

From snout to vent 16 mm.

A single specimen from Newlands, near Cape Town (Coll. Lightfoot).